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Rocky Flats Environmental Technology Site

RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)

BUILDINGS 125 AND 763, AND TRAILER 900C

GROUP 10 CLOSURE PROJECT

Reviewed for Classification/UCNI /OUO
By: Janet Nesheim, Derivative Classifier
DOE, EMCBC
Date: 10-14-08
Confirmed Unclassified, Not UCNI /not OUO

REVISION 0

November 14, 2001

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REVISION 0

November 14, 2001

Reviewed by: _____ Date: 11/29/01
Paul Miles, Quality Assurance

Reviewed by: _____ Date: 11/30/01
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Approved by: _____ Date: 12/3/01
Vern Guthrie, KH Project Manager

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ABBREVIATIONS/ACRONYMS

ACM	Asbestos containing material
Be	Beryllium
CDPHE	Colorado Department of Public Health and the Environment
$DCGL_{EMC}$	Derived Concentration Guideline Level – elevated measurement comparison
$DCGL_W$	Derived Concentration Guideline Level – Wilcoxon Rank Sum Test
D&D	Decontamination and Decommissioning
DDCP	Decontamination and Decommissioning Characterization Protocol
DOE	U.S. Department of Energy
DPP	Decommissioning Program Plan
DQA	Data quality assessment
DQOs	Data quality objectives
EPA	U.S. Environmental Protection Agency
FDPM	Facility Disposition Program Manual
HVAC	Heating, ventilation, air conditioning
HSAR	Historical Site Assessment Report
IHSS	Individual Hazardous Substance Site
IWCP	Integrated Work Control Package
K-H	Kaiser-Hill
LBP	Lead-based paint
LLW	Low-level waste
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
NORM	Naturally occurring radioactive material
NRA	Non-Rad-Added Verification
OSHA	Occupational Safety and Health Administration
PARCC	Precision, accuracy, representativeness, comparability and completeness
PCBs	Polychlorinated Biphenyls
PDS	Pre-demolition survey
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFFO	Rocky Flats Field Office
RLC	Reconnaissance Level Characterization
RLCR	Reconnaissance Level Characterization Report
RSP	Radiological Safety Practices
SVOCs	Semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TSA	Total surface activity
VOCs	Volatile organic compounds

EXECUTIVE SUMMARY

A Reconnaissance Level Characterization (RLC) was performed to enable facility "Typing" per the RFETS Decommissioning Program Plan (DPP; K-H, 1999) and compliant disposition and waste management of Group 10 facilities (i.e., Buildings 125 and 763 and Trailer 900C). Because these facilities were anticipated to be Type 1 facilities, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP). All facility surfaces were characterized in this RLC, including the interior and exterior surfaces (i.e., floors (slabs), walls, ceilings and roofs). Environmental media beneath and surrounding the facilities were not within the scope of this RLCR and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

The RLC encompassed both radiological and chemical characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP). The characterization built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Reports.

Results indicate that no radiological contamination exists in excess of the PDSP unrestricted release limits of DOE Order 5400.5, and no hazardous wastes. Building 125 contains both friable and non-friable asbestos. Fluorescent light ballasts may contain PCBs. Any PCB ballasts and asbestos containing materials will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. All concrete associated with these facilities meet the criteria for recycling concrete per the RFCA RSOP for Recycling Concrete.

Based upon this RLCR and subject to concurrence by the CDPHE, Group 10 facilities are considered to be Type 1 facilities. To ensure that the facilities remain free of contamination and that RLC data remain valid, isolation controls have been established, and the facilities have been posted accordingly.

1 INTRODUCTION

A Reconnaissance Level Characterization (RLC) was performed to enable compliant disposition and waste management of Group 10 facilities (i.e., Buildings 125 and 763, and Trailer 900C). Because these facilities were anticipated to be Type 1 facilities, a PDS characterization was performed. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces of the facilities (i.e., floors (slabs), walls, ceilings and roofs). Environmental media beneath and surrounding the facilities were not within the scope of this RLC Report (RLCR) and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed. Among these are the Group 10 facilities. The locations of these facilities are shown in Attachment A, Facility Location Map. These facilities no longer support the RFETS mission and will be removed to reduce Site infrastructure, risks and/or operating costs.

Before the facilities can be removed, a Pre-Demolition Survey (PDS) must be conducted; this document presents the PDS results. The PDS was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). The PDS is built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Reports.

1.1 Purpose

The purpose of this report is to communicate and document the results of the RLC effort. PDSs are performed before building demolition to define the final radiological and chemical conditions of a facility. Final conditions are compared with the release limits for radiological and non-radiological contaminants. PDS results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types.

1.2 Scope

This report presents the final radiological and chemical conditions of the Group 10 facilities. Environmental media beneath and surrounding the facilities are not within the scope of this RLCR and will be addressed using the Soil Disturbance Permit process and in compliance with RFCA.

1.3 Data Quality Objectives

The Data Quality Objectives (DQOs) used in designing this RLC were the same DQOs identified in the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). Refer to section 2.0 of MAN-127-PDSP for these DQOs.

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2 HISTORICAL SITE ASSESSMENT

Facility-specific Historical Site Assessments (HSAs) were conducted to understand facility histories and related hazards. The assessments consisted of facility walkdowns, interviews, and document review, including review of the Historical Release Report (refer to the D&D Characterization Protocol, MAN-077-DDCP). Results were used to identify data gaps and needs, and to develop radiological and chemical characterization packages. Results of the facility-specific HSAs were documented in facility-specific Historical Site Assessment Reports (HSARs). Refer to Attachment B, Historical Site Assessment Report, for copies of the Group 10 HSARs. In summary, the HSAR identified no potential for radiological and chemical hazards, except the potential for asbestos containing materials and PCBs in paint and light ballasts.

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

Group 10 facilities were characterized for radiological hazards per the PDSP. Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describes the minimum survey requirements (refer to the RISS Characterization Project files for the Group 10 Radiological Characterization Plan). Radiological survey unit packages were developed for each survey unit. Survey unit identification numbers are as follows: G10001 – G10005. Each survey unit included the interior and exterior surfaces of the affected facility/structure. Individual radiological survey unit packages are maintained in the RISS Characterization Project files.

Group 10 survey unit packages were developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*. Radiological survey data, statistical analysis results, survey locations, and radiological scan maps are presented in Attachment C, Radiological Data Summary and Survey Maps.

A total of 152 TSA measurements, 152 RSA measurements, and 5% scan surveys were performed on the three Group 10 facilities. Four survey locations in Survey Unit G10-002 (B763 exterior) initially indicated gross alpha TSA above or near the $DCGL_w$. These four survey locations were sealed and allowed to decay overnight. Follow-up surveys gave gross alpha TSA readings below the $DCGL_w$, indicating that the previous measurements were not due to DOE-added material and were most likely due to radon daughter products. None of the other measurements indicated elevated activity above the appropriate $DCGL_w$ values. Therefore, the PDS confirmed the indicated facilities do not contain radiological contamination above the surface contamination guidelines provided in the RFETS PDSP for D&D Facilities. Isolation control postings are displayed on affected structures to ensure no radioactive materials are introduced.

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4 CHEMICAL CHARACTERIZATION AND HAZARDS

Group 10 facilities were characterized for chemical hazards per the PDSP. Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on or in these facilities. Based upon a review of historical and process knowledge, visual inspections, and PDSP DQOs, additional sampling needs were determined. A Chemical Characterization Plan (refer to RISS Characterization Project files for the Group 10 Chemical Characterization Plan) was developed during the planning phases that describes sampling requirements and the justification for the sample locations and estimated sample numbers. Contaminants of concern included asbestos, beryllium, RCRA/CERCLA constituents, and PCBs. Refer to Attachment D, Chemical Summary Data and Sample Maps, for details on sample results and sample locations. Isolation control postings are displayed on affected structures to ensure no hazardous materials are introduced.

4.1 Asbestos

Building 763 and Trailer 900C were inspected by a CDPHE-certified inspector in accordance with the PDSP. No building materials suspected of containing asbestos were located. Therefore, no bulk samples were taken for PLM analysis.

In 1996, a comprehensive asbestos inspection was conducted in Building125 (refer to "Asbestos Inspection and Operations and Maintenance Plan for Building 125," by SITEX Environmental, Inc., December 31, 1996 in Attachment D). The sample results revealed the presence of both friable and non-friable asbestos containing materials. Subsequent to the initial PDS walk-down and review of the inspection results, several asbestos data gaps were identified. Therefore, bulk samples were obtained of the interior window caulking and the exterior caulking of the sheet-metal siding. Samples were obtained by a CDPHE-certified asbestos inspector in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 0.* The window caulking contained *trace* amounts of asbestos (<1% by *point count*), and the exterior caulking contained >1% asbestos from 1.25% to 4% by *point count*. Sampling results and locations are presented in Attachment D.

4.2 Beryllium (Be)

Based on the HSARs and personnel interviews, these buildings were anticipated Type 1 facilities. There is not, however, adequate historical and process knowledge to conclude that beryllium was not used or stored in these buildings. Therefore, biased beryllium sampling was performed in accordance with the PDSP and the *Beryllium Characterization Procedure, PRO-536-BCPR, Revision 0, September 9, 1999.* Biased sample locations corresponded with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition.

All beryllium sample results were less than 0.1 $\mu g/100cm^2$. Beryllium sample data and sample location maps are contained in Attachment D, Chemical Data Summaries and Sample Maps.

4.3 RCRA/CERCLA Constituents [including metals and volatile organic compounds (VOCs)]

Based on the Group 10 HSARs, interviews and facility walkdowns, there is no reasonable likelihood that RCRA/CERCLA constituents have contaminated the three facilities. Therefore, RCRA/CERCLA constituent sampling was not performed in these facilities. Mercury vapor lights and lead shielding will be removed prior to demolition.

Sampling for lead in paint in the Group 10 facilities was not performed. Environmental Waste Compliance Guidance #27, *Lead-based Paint (LBP) and Lead-based paint Debris Disposal*, states that LBP debris generated outside of currently identified high contamination areas shall be managed as non-hazardous (solid) wastes, and additional analysis for characteristics of hazardous waste derived from LBP is not a requirement for disposal.

4.4 Polychlorinated Biphenyls (PCBs)

Based on the Group 10 HSARs, interviews and facility walkdowns, no PCB-containing equipment were ever present in Building 763 and Trailer 900C, and therefore, there is no potential for PCB contamination in these facilities resulting from spills. Therefore, PCB sampling was not performed in these facilities. In addition, based on the age of the facilities (constructed after 1980), paints do not contain PCBs.

Stains in the Building 125 concrete were sampled and analyzed for PCBs. Sampling and analysis results show no PCB contamination. Sample data and locations are presented in Attachment D. Based on the age of B125 (constructed in 1965), some paints may contain PCBs. Painted demolition debris from Building 125 will either be disposed of as PCB Bulk Product Waste, or, if meeting the release criteria for all other constituents as noted in the Concrete RSOP, the concrete will be used as backfill onsite.

Some facilities may contain fluorescent light ballasts that contain PCBs. Therefore, fluorescent light fixtures will be inspected to identify PCB ballasts during removal operations. PCB ballasts will be identified based on factors such as labeling (e.g., PCB-containing and non-PCB-containing), manufacturer, and date of manufacturing. All ballasts that do not indicate non-PCB-containing are assumed to be PCB-containing.

5 PHYSICAL HAZARDS

Physical hazards associated with Group 10 facilities consist of those common to standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls. There are no unique hazards associated with the facilities. The facilities have been relatively well maintained and are in good physical condition, and therefore, do not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practices.

6 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of Group 10 facilities, and consequent waste management, are of adequate quality to support the decisions documented in this report. The data presented in this report (Attachments C and D) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original DQOs of the project.

In summary, the Verification and Validation (V&V) process corroborates that the following elements of the characterization process are adequate:

- the *number* of samples and surveys;
- the *types* of samples and surveys;
- the sampling/survey process as implemented "in the field"; and,
- the laboratory analytical process, relative to accuracy and precision considerations.

Details of the DQA are provided in Attachment E.

7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of Group 10 facilities will generate a variety of wastes. Estimated waste types and waste volumes are presented below by facility. All wastes can be disposed of as sanitary waste, except asbestos containing material and PCB Bulk Product Waste. There is no radioactive or hazardous waste. Asbestos and PCB ballasts will be managed pursuant to Site asbestos and PCB abatement and waste management procedures.

Waste Volume Estimates and Material Types, Group 10

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
B125	15,000	300	3,400	1,600	600	1,080 friable 5,400 non-friable	11,600
B763	6,300	300	600	1,000	0	0	900
T900C	No waste will be generated; trailer will be sold and returned to commerce.						

8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, Group 10 facilities (i.e., Buildings 125 and 763, and Trailer 900C) are classified as RFCA Type 1 facilities pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999). The Type 1 classification is based on a review of historical and process knowledge, and newly acquired RLC data, and will be subject to concurrence by the Colorado Department of Public Health and the Environment (CDPHE).

The RLC of the Group 10 facilities was performed in accordance with the DDCP and PDSP, all PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. These facilities do not contain radiological or hazardous wastes. PCB ballasts and asbestos containing material will be removed and disposed of in compliance with EPA and CDPHE regulations. Environmental media beneath and surrounding the facilities will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA. All concrete associated with these facilities meet the criteria for recycling concrete per the RFCA RSOP for Recycling Concrete.

To ensure that the Type 1 facilities remain free of contamination and that RLC data remain valid, isolation controls have been established, and the facilities are posted accordingly.

9 REFERENCES

DOE/RFFO, CDPHE, EPA, 1996. Rocky Flats Cleanup Agreement (RFCA), July 19, 1996.

DOE Order 5400.5, "Radiation Protection of the Public and the Environment."

DOE Order 414.1A, "Quality Assurance."

EPA, 1994. "The Data Quality Objective Process," EPA QA/G-4.

K-H, 1999. Decommissioning Program Plan, June 21, 1999.

MAN-131-QAPM, *Kaiser-Hill Team Quality Assurance Program*, Rev. 0, November 15, 2000.

MAN-076-FDPM, *Facility Disposition Program Manual*, Rev. 1, September 1999.

MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol*, Rev. 3, April 23, 2001.

MAN-127-PDSP, *Pre-Demolition Survey Plan for D&D Facilities*, Rev. 0, April 23, 2001.

MARSSIM - Multi-Agency Radiation Survey and Site Investigation Manual, December 1997 (NUREG-1575, EPA 402-R-97-016).

PRO-475-RSP-16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation, and Closure,* Rev. 1, May 22, 2001.

PRO-476-RSP-16.02, *Pre-Demolition (Final Status) Radiological Surveys of Surfaces and Structures*, Rev. 1, May 22, 2001.

PRO-477-RSP-16.03, *Radiological Samples of Building Media*, Rev. 1, May 22, 2001.

PRO-478-RSP-16.04, *Radiological Survey/Sample Data Analysis for Final Status Survey*, Rev. 1, May 22, 2001.

PRO-479-RSP-16.05, *Radiological Survey/Sample Quality Control for Final Status Survey*, Rev. 1, May 22, 2001.

PRO-563-ACPR, Asbestos Characterization Procedure, Revision 0, August 24, 1999.

PRO-536-BCPR, Beryllium Characterization Procedure, Revision 0, August 24, 1999.

RFETS, Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition.

RFETS, Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal.

RFCA Standard Operation Protocol for Recycling Concrete, September 28, 1999.

RFETS, Historical Site Assessment for Group 10, August 2001.

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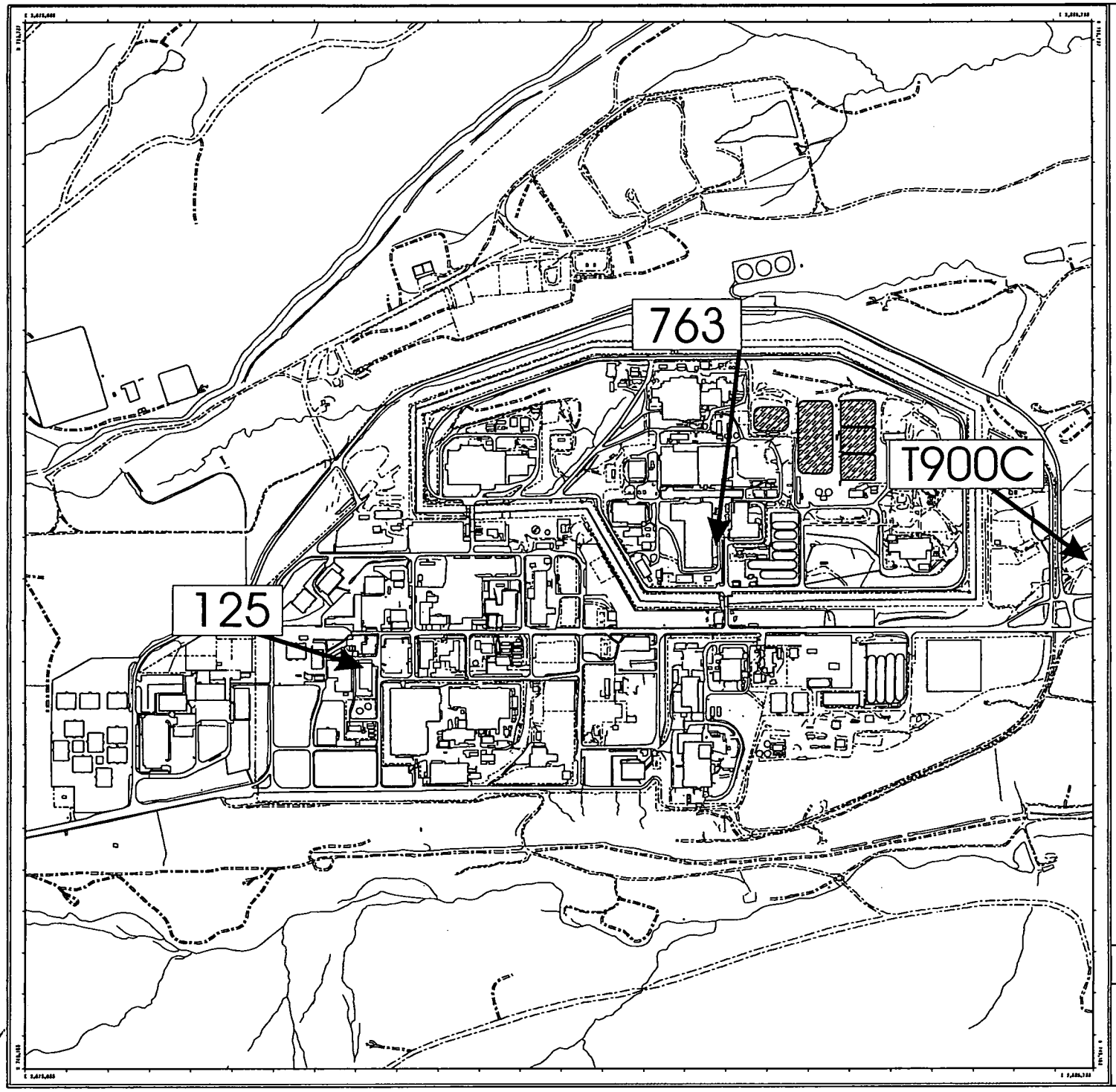
ATTACHMENT A

Facility Location Map



Building Cluster
125, 763, T900C

Standard Map Features

- Buildings and other structures
- Solar Evaporation Ponds (SEPs)
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Paved roads
- Dirt roads

DATA SOURCE BASE FEATURES:
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs. 1/95

N

Scale = 1 : 12450
1 inch represents approximately 1038 feet
250 0 500 1000ft

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

GIS Dept. 303-966-7707

Prepared by:
DynCorp
THE ART OF TECHNOLOGY

Prepared for:
KAISER-HILL COMPANY

MAP ID: FY 2002

October 22, 2001

NT_Svr w:/projects/fy2002/02-0051/overview_125_763_T900C.cdr

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ATTACHMENT B

Historical Site Assessment Report

D&D RISS Facility Characterization
Historical Site Assessment Report

Facility ID: Building 125, Standards Laboratory
Anticipated Facility Type (1, 2, or 3):): Building 125 = Type 1
Refer to attached site drawing for facility location.
This facility – specific Historical Site Assessment (HSA) has been performed in accordance with:
D&D Characterization Protocol, RFETS MAN-077-DDCP, latest version, and
Facility Disposition Program Manual, RFETS MAN-076-FDPM, latest version

Physical Description

The Building 125 Standards Lab is a single-story, pre-engineered, metal-frame building on a concrete foundation and floor. Building 125 is located immediately north of the 215A Water Tower and adjacent to Third Street. Building 125 was constructed and put into service in 1965. The exterior walls are tan color enamel corrugated steel panels sandwiched over 3" of fiberglass insulation. Building 125 is a rectangular-shaped facility with dimensions of approximately 187' X 90' X 16' high at the roof eve, 25' high at the roof peak. The roof is corrugated steel panels over 3" batting insulation. The metal roof of Building 125 is also painted a tan color. The square footage of Building 125 is approximately 16,830 square. Building 125 has numerous floor drains connected to the plant sewer system. Building 125 has fourteen roof drain downspouts, seven on the west roof eve and seven on the east roof eve. The interior walls are concrete block, gypsum board, or stainless steel/polystyrene panels The office area of Building 125 is partitioned with Transite® and steel-stud construction. Most hallways, rooms, and labs have the drop-ceilings with metal ceiling tiles, however some hallways and offices have the drop-ceilings with acoustical ceiling tiles. Building 125 has 5 entry doors. Door 1 is a personnel entry door on the north side. Door 2 is a ground-level dock door in the southeast corner of the building with an I-beam and chain hoist and double metal doors each 4' X 8'. Door 3 is a 4' X 7' double personnel entry door with wire glass panes in the upper half of the door. Door 4 is an 8' wide X 10' high rollup metal door leading into the south end of Building 125 Utility Room 125. Door 5 is personnel entry door on the northwest corner of Building 125.

Building 125 has general building HVAC systems for human comfort and specialized HVAC systems for precise climate control of some of the calibration laboratories. No specialized off-gas cleanup or filtering systems are necessary because the only airborne hazardous materials are small quantities of vapor released from volatile cleaning agents (ethanol and freon). The HVAC system interfaces with the steam, electrical, and compressed air systems. There are several window-mounted refrigeration-type air conditioning units. In addition, the dock area, Room 109, has two roof-mounted refrigeration-type air conditioning units.

Building 125 electrical power is provided by a 13.8-kV distribution system via a 13.8-kV/480-V transformer located west of the building. The 480-V power is provided to appropriate transformers and electrical distribution equipment in Room 125. There are no emergency or backup electrical power systems required for safe facility operation. Self-contained, battery-powered emergency lighting is provided for emergency egress. The exterior south and west walls each contain two lighting fixtures that appear to be mercury vapor lights.

Approximately ten percent of Building 125 is protected by a wet-pipe sprinkler system. The system is fed from a 4-inch firewater line in Room 125 from the west side of the building. The post indicator valves (PIVs) located outside the building have protective posts in the ground to prevent vehicle impacts. There is also an exterior fire department connection on the west wall of Room 125.

Building 125 has 125-psi steam from the Site distribution system to support the heating needs. Building 125 domestic cold water is distributed throughout the building. Building 125 has a LSDW System with speakers in all areas of the facility. Building 125 is connected to the Plant sanitary sewer system, and all floor drains, rest room facilities, and chemical lab bench sinks are connected to the sanitary sewer system. There are no process sinks or process drains in Building 125. Regulated liquid wastes are disposed of via site support services. Used oils and other non-regulated liquids are stored in drum or waste

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Physical Description (Con't)

containers. Compressed air (95 psi) is used throughout Building 125, provided by various compressors in the facility. Filtration systems are used to clean and dry air. Liquid nitrogen was supplied from a large tank, Tank 079, which was located to the east of Building 125. Liquid Nitrogen Tank 079 was removed in June 2001, but the concrete pad remains. The liquid nitrogen lines supplied liquid nitrogen for low-temperature calibration equipment via a manifold and vacuum system cold traps via portable dewars.

Building 125 has several interfaces with other areas, facilities, systems, processes and operations. Building 125 interfaces with the site utility systems (natural gas, electric, and water, etc.). A back-up air compressor is located in Room 125 that supplies approximately eight other nearby buildings.

Historical Operations

Specific work areas include Rooms 104, 105, 110, and 111 were laboratory and calibration areas. Room 114 was the Chemistry Standards Laboratory. Rooms 115, 116, 117, 118, and 119 were modular labs or specialized labs that required precise climate controls. Room 103 was a computer room. Room 109 was the receiving/shipping and storage room. This area is used to store flammable materials in fire-resistant storage cabinets. A system of monorails was used to move materials in and out of Room 109. Room 125 contains an HVAC, air compressors, and other building required utilities. Liquid nitrogen was supplied from a large tank, Tank 079, which was located to the east of Building 125. Liquid Nitrogen Tank 079 was removed in June 2001, but the concrete pad remains.

Building 125 Standards Laboratory is included in the Historic American Engineering Record. Building 125 is included in the Site Historical Release Report, PAC 100-2 and UBC 125. Building 125 Standards Laboratory has a Safety Analysis Report (SAR), which is included in Volume II of Site SAR. Building 125 has a WSRIC Book for all the calibration and other processes that were operated in the building. Building 125 does not have any tanks or areas on the Master Listing of RCRA Units. The Building 125 is not on the Listing of Beryllium Areas, Historical and Present. Engineering Drawings exist for the Building 125 Standards Laboratory.

Contaminants of Concern

Asbestos

Describe any potential, likely, or known sources of asbestos:

The original construction in 1965 contains Transite® and Gypsum® wall panels and 9" X 9" asbestos-containing floor tiles throughout the offices, lab rooms, and other work rooms. Asbestos insulation may have been used on steam, steam condensation, and hot domestic water pipes in Building 125. All entry doors into Building are posted with the standard ACM warning signs.

Asbestos data exists in the Plant Industrial Hygiene Asbestos Library, T-130B east of Cubicle 62. The Building 125 Asbestos Maintenance Plan, Sampling Plan, and Asbestos Sampling Results are contained in the Building 125 Asbestos Book, which is dated December 31, 1996.

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Beryllium (Be)

Describe any potential, likely, or known Be production or storage locations:

There were no known, likely, or potential beryllium production or storage areas in Building 125. Some equipment items shipped to Building 125 for calibration potentially could have been contaminated with Be. Equipment being shipped out of Building 125 was routinely smear checked for Be contamination; none of the three interviewees remembers the smear checks being positive for Be. The Building 125 is not on the Listing of Beryllium Areas, Historical and Present.

Summarize any recent Be sampling results: None of the people interviewed knew of any Be sampling that was ever conducted in Building 125.

Lead

Describe any potential, likely, or known sources of Lead (e.g., paint, shielding, etc.):
Building 125 does not have any lead shielding, but numerous lead bricks were used for counter weights in several of the lab rooms. During an August 2001 walkdown tour, no lead of any kind was found. Building 125 was constructed in 1965; and the many painted areas both inside and outside may have been painted with lead-based paints. Lead solder may have been used in electrical connections in Building 125.

RCRA/CERCLA Constituents

Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e.g., chemical storage, waste storage, processes):

During the operation of the Building 125 Standard Laboratories, many chemicals were used and stored in various storage cabinets and lab areas. The main chemical storage cabinets were in Room 109, which is the dock and receiving/shipping area. Other Building 125 labs and work area rooms contained small satellite chemical storage areas. Building 125 contained no regulated liquid waste storage. Site support services are utilized for removal of RCRA waste from Building 125.

The interviewees had no knowledge of sources of RCRA/CERCLA constituents.
The Building 125 exterior south and west walls each contain two lighting fixtures that appear to be mercury vapor lights. Building 125 does not have any tanks or areas that are listed on the Master Listing of RCRA Units. Building 125 does not have any equipment that is listed in the Appendix 1 – Idle Equipment With Hazardous Materials Inventory. Building 125 does not any have any equipment that is listed in the Appendix 1A – Idle Equipment With Non-Hazardous Materials Inventory.

Describe any potential, likely, or known spill locations (and sources, if any):
During approximately 35 years of Standards Laboratory operations, chemical and mercury spills occurred in the labs and dock areas of Building 125.

Describe methods in which spills were mitigated, if any:
Chemical and mercury spills were cleaned up using approved methods (historically every visible drop of mercury was picked up and re-contained).

PCBs

Describe any potential, likely, or known sources of PCBs (e.g., light Ballasts, paints, equipment, etc.):
Power transformers, light ballasts, and paints used in the Building 125 could contain PCBs.

Describe any potential, likely, or known spill locations (and sources, if any):
Interviewees had no knowledge of PCBs and/or spills of PCBs.

Describe methods in which spills were mitigated, if any:
Interviewees had no knowledge of PCBs and/or spills of PCBs, therefore mitigation would not have been required.

Radiological Contaminants

Describe any potential, likely, or known radiological production or storage locations:

Interviewees had no knowledge of any radiological production areas at the Building 125. The only radioactive postings found in Building 125 during the walkdown tour was on the locked door of Room 113. Room 113 was said to have contained sealed sources that were removed from equipment in the various labs of Building 125. Room 113 still contains sealed pieces of depleted uranium and contaminated pieces of equipment found during strip-out of the Building 125 labs, as of August 22, 2001, as per Richard A. Link.

Room 119, of Building 125, was posted as a Radiation Monitored Area (RMA) from approximately 2000 until 2001 because of suspect internally contaminated equipment being stored there (this suspect internally contaminated equipment was consolidated into this one room from throughout Building 125). As of August 1, 2001, all of the suspect internally contaminated equipment has been removed from Room 119 of Building 125.

Describe any potential, likely, or known spill locations (e.g., known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc.):

Describe methods in which spills were mitigated, if any:
One interviewee (Richard A. Link) said that historically the Chemical Standards Laboratories made up low-level radioactive standards for various labs on Plant Site. Mr. Link said that during the preparation of these standards, spills might have occurred but that he no personal knowledge of such a spill. If low-level spills occurred, they would have been cleaned up using approved cleanup methods, as per Mr. Link.
No other interviewee had knowledge of radioactive materials having been spilled within Building 125.

Other interviewees had no knowledge of radioactive materials of any kind at the Building 125 Site; therefore spill mitigation would not have been required.
Describe any potential, likely, or known isotopes of concern (e.g., weapons grade plutonium, uranium isotopes, pure Beta emitters, mixed fission products, etc.):
Historically sealed sources of Pu 238 and cesium were used and stored in Building 125. These sources have long since been removed (removal dates unknown).
Describe any potential, likely, or known external facility contamination (e.g., stack release points, unfiltered ventilation, facility's physical location to known site releases, etc.):

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Radiological Contaminants (Cont't)

Interviewees had no knowledge of radioactive materials spills of any kind within Building 125; therefore an answer to this statement does not apply.

Describe any process waste lines associated with the facility, if any (Are any abandoned? Capped?)

There are no process waste lines in Building 125. Building 125 never had any process waste lines. Therefore Building 125 has no abandoned or capped process waste lines.

Environmental Restoration Concerns

Describe any ER concerns that could affect facility characterization (e.g., IHSSs, PACs, UBCs):

Building 125 is under UBC-125. Nick Demos, ER Site Manager, stated that the UBC is designated because of the historical mercury inventory and because of mercury spills that occurred.

Interviewees had no knowledge of any other ER concerns for the Building 125 Site that could affect facility characterization. It was determined that PAC 100-606 needed no further action (refer to HRR).

Additional Information

Describe any additional information that may be useful during facility characterization (e.g., contaminant migration routes, waste-handling operations, physical hazards, Historical Release Reports, WSRIC data, etc.):

Interviewees had no knowledge of any additional information that may be useful during facility characterization. There is very little HRR information concerning Building 125. Extensive WSRIC books exist for Building 125, but the labs for which they were written no longer exist.

References

Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews). Attach all applicable supporting documentation.

References used were: HRR, Site SAR, IHSS/PAC/UBC Site Maps, Listing of Beryllium Areas, Historical and Present, the T-130B Industrial Hygiene Asbestos Inventory Library, Building 125 Engineering Drawings, Appendix 1 of Idle Equipment With Hazardous Materials Inventory, Master Listing of RCRA Units, and Appendix 1A of Idle Equipment With Non-Hazardous Materials Inventory, the Building 125 WSRIC Books, and Historic American Engineering Record for the RFETS Building 125 Standard Laboratory.

Waste Volume Estimates and Material Types Building 125

Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM	Other Waste
15,021	300	3,397	1,572	576	Transite - 772 cu ft Floor Tile - 53 cu ft	Glass 5cu ft Al - 118 cu ft Insul. 11,057 cu ft Ceramic tile – 9 cu ft Accoust. ceil. tile - 160 cu ft Accoust. wall - 241cu ft

Further Actions

Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):

Interviewees had no further actions or recommendations concerning the characterization of the Building 125. The author of this RISS HSA Report has no further actions or recommendations concerning the characterization of the Building 125.

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Further Actions

Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):
Interviewees had no further actions or recommendations concerning the characterization of the Building 125. The author of this RISS HSA Report has no further actions or recommendations concerning the characterization of the Building 125.

Note:

This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations. Information contained in this HSA only represents a "snapshot" in time. Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations, which may conflict with this report. However, this report will not be amended, and the newer data will take precedence over the data in the report. Newer Data will appear in the RLCR/PDSR

Prepared By: Bob Sheets / Bob Sheets / Aug. 27, 2001
Print Name / Signature / Date

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D&D RISS Facility Characterization
Historical Site Assessment Report

Facility ID: Building 763, South Breezeway, Portal 1 to Building 750

Anticipated Facility Type (1, 2, or 3):): Building 763 = Type 1

Refer to attached site drawing for facility location.
This facility – specific Historical Site Assessment (HSA) has been performed in accordance with:
D&D Characterization Protocol, RFETS MAN-077-DDCP, latest version, and
Facility Disposition Program Manual, RFETS MAN-076-FDPM, latest version

Physical Description

Building 763, south breezeway in between Portal 1and Building 750, is a single-story, aboveground tunnel/covered walkway building with masonry exterior walls on a poured reinforced concrete foundation and floor. Building 763 is approximately 316' long X 10' wide X 12' high. The square footage of Building 763 is approximately 3,160 square feet. Building 763 has three 3' X 7'metal double entry doors with ¼" X 24" X 34" tempered safety glass in each door (one set of double doors on the south side, one set of double doors on the north side, and one set of double doors on the east side). The roof and concrete block walls extend approximately 4 feet beyond the entry doors on the south and north providing covered entryways. Both the south and north covered entryways have "wind clean-out" openings. The roof of Building 763 is flat and has three sections because the building is on a slight incline to the north. The middle roof section of Building 763 is approximately 18 inches higher than the south section; and the north roof section is approximately 18 inches higher that the middle roof section. The south and east roof edge of Building 763 has out-rigger fence posts every six feet approximately three feet high, tilting outward, with three strands of barbwire installed for security. Building 763 has a corrugated metal roof supported by steel I-beams. The metal roof is covered with 1-1/2 inches rigid insulation (assumed to be rigid Styrofoam® sheets) and .060 inches EPDM sheeting (Ethylene Propylene Diene Monomer). All edges of the roof are covered with galvanized metal flashing. The metal roofing and metal roof flashing are nailed to bolted down wood.

Building 763 is not a heated building and does not have a ventilation system, but the east wall has sixteen, 8" X 18" extruded aluminum louvered vents (non-operating) to the outside (8 near floor and 8 near ceiling/roof level). Building 763 has sixteen 2' X 4' fixed aluminum sash windows with Lexan® (thermoplastic carbonate-linked polymers) glazing in the east wall. Building 763 has thirteen overhead 8-foot 4-tube fluorescent light fixtures.

Building 763 does not have any floor drains, but it does have one storm sewer manhole cover in the floor, which is located near the west wall in the south half of the building.

Historical Operations

The construction of Building 763 was completed in December 1980, and the facility was put into service in January 1981. Building 763 has always been used as a covered walkway/tunnel from Portal 1 to Buildings 707, 750. 776 and 778. For approximately three years Building 763 was also used as a dosimeter badge/exchange facility in addition to the covered walkway/tunnel. During the time the facility was used as a dosimeter storage/exchange facility, Dosimeter Badge Storage Racks were installed on the east and west walls for approximately 2/3 of the north section of the facility. The Dosimeter Storage Racks have since been removed.

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Current Operational Status

Two interviewees agreed that the Building 763 facility is still fully operational and that it is still used for what it was designed for, protecting employees from severe weather conditions while walking from Portal 1 to their respective work building. Building 763 is not included in the Site Historical Release Report, but land/soils has an IHSS/PAC history. Building 763 does not have a Safety Analysis Report. Building 763 does not have a WSRIC, and it does not have any tanks or areas on the Master Listing of RCRA Units. Building 763 is not on the List of Beryllium Areas, Historical and Present. Engineering Drawings and Construction Drawings exist for Building 763.

Contaminants of Concern

Asbestos

Describe any potential, likely, or known sources of Asbestos: Building 763 is not posted as having asbestos containing materials (ACM). There are no known building-specific asbestos reports for Building 763.

Beryllium (Be)

Describe any potential, likely, or known Be production or storage locations: There are no postings referring to Be areas anywhere on any of the doors or walls of Building 763. Interviewees said that they had no knowledge of any Be being anywhere in or passing through Building 763. The Building 763 does not appear on the List of Beryllium Areas, Historical and Present.

Summarize any recent Be sampling results: Neither of the people interviewed knew of any Be sampling that was ever conducted in Building 763.

Refer to Characterization Package and RLC/PDSR.

Lead

Describe any potential, likely, or known sources of Lead (e.g., paint, shielding, etc.): The interior concrete block walls of Building 763 are painted with an off-white paint; the exterior walls of Building 763 are painted brown. The facility was constructed in 1980, and it is not known if lead-based paints were used on the interior or exterior walls. Therefore, lead-based paints might have been used. There is no lead shielding (no need for it) in Building 763. Lead solder may have been used in the metal flashing on the roof and in electrical connections within Building 763.

RCRA/CERCLA Constituents

Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e.g., chemical storage, waste storage, processes): The interviewees had no knowledge of sources of RCRA/CERCLA constituents, except lighting. Building 763 has three mercury-vapor exterior doorway lights. Building 763 has 13 8-foot 4-tube fluorescent lighting fixtures. Building 763's three exterior mercury lighting lamps are known to contain mercury. Interviewees did not know if the ballasts in the fluorescent lighting fixtures contain any PCB. Building 763 does not have any tanks or areas that are listed on the Master Listing of RCRA Units. Building 763 does not have any equipment that is listed in the Appendix 1 – Idle Equipment With Hazardous Materials Inventory. Building 763 does not have equipment that is listed in the Appendix 1A – Idle Equipment With Non-Hazardous Materials Inventory.

Building 763 is not mentioned in the Site SAR. There is no SAR for Building 763. A WSRIC was never written for Building 763.

Describe any potential, likely, or known spill locations (and sources, if any): Neither of the interviewees had any knowledge of any spills of any kind that ever occurred in Building 763.

Describe methods in which spills were mitigated, if any: Neither of the interviewees had any information of any spills ever occurring in Building 763, therefore, spill mitigation was never required.

PCBs

Describe any potential, likely, or known sources of PCBs (e.g., light ballasts, paints, equipment, etc.): The Building 763 lighting ballasts and paints potentially could contain PCBs. Building 763 does not have any power transformers.

Describe any potential, likely, or known spill locations (and sources, if any): Interviewees had no knowledge of PCBs and/or spills of PCBs in Building 763.

Describe methods in which spills were mitigated, if any: Interviewees had no knowledge of PCBs and/or spills of PCBs, therefore, mitigation was never required.

Radiological Contaminants

Describe any potential, likely, or known radiological production or storage locations: Interviewees had no knowledge of any radiological production or storage areas in Building 763.

Describe any potential, likely, or known spill locations (e.g., known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc.): Interviewees had no knowledge of any radioactive materials of any kind used or stored in or passing through Building 763, therefore the likelihood of a radiological spill was non-existent.

Describe methods in which spills were mitigated, if any: NA Interviewees had no knowledge of any radioactive materials of any kind used or stored in, or passing through Building 763, therefore, spill mitigation was never required.

Describe any potential, likely, or known isotopes of concern (e.g., weapons grade plutonium, uranium isotopes, pure beta emitters, mixed fission products, etc.): NA. Interviewees had no knowledge of any radioactive materials of any kind used or stored in, or passing through Building 763.

Describe any potential, likely, or known external facility contamination (e.g., stack release points, unfiltered ventilation, facility's physical location to known site releases, etc.):
NA. Interviewees had no knowledge of any radioactive materials of any kind used, stored in, or passing through Building 763.

Describe any process waste lines associated with the facility, if any (Are any abandoned? Capped?) Building 763 has no process waste lines, therefore, there are no abandoned and/or capped process waste lines. Building 763 has one storm sewer access manhole cover in the floor near the west wall (south section of the building).

Environmental Restoration Concerns

Describe any ER concerns that could affect facility characterization (e.g., IHSSs, PACs, UBCs): Interviewees had no knowledge of any ER concerns associated with Building 763. Nick Demos, ER Program, does have IHSS, PAC or UBC concerns for the soils at the Building 763 site. There are three IHSS/PACs concerning the soils/land that Building 763 is constructed on. These IHSS/PACs are 700-185, 700-194, and IHSS/PAC 700-1103.

Additional Information

Describe any additional information that may be useful during facility characterization (e.g., contaminant migration routes, waste handling operations, physical hazards, Historical Release Reports, WSRIC data, etc.): Interviewees had no knowledge of any additional information that may be useful during facility characterization. There are no WSRIC data concerning Building 763.

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D&D RISS Facility Characterization
Historical Site Assessment Report

References
Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews). Attach all applicable supporting documentation.

References used were: Site SAR, HRR, IHSS/PAC/UBC Site Maps, List of Beryllium Areas, Historical and Present, B130 Asbestos Inventory Library, Building 763 Engineering Drawings, Master Listing of RCRA Units, Appendix 1 of Idle Equipment With Hazardous Materials Inventory, and Appendix 1A of Idle Equipment With Non-Hazardous Materials Inventory.

Waste Volume Estimates and Material Types Building 763

Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM	Other Waste
6,300	320	610	1,050	0	Unknown	Lexan® 32 cu ft Glass 3 cu ft Insulation 790 cu ft Mercury vapor lights 3 cu ft Fluorescent light fix. 52 cu ft Aluminum metal 16 cu ft

Further Actions
Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):

Interviewees had no further actions or recommendations concerning the characterization of Building 763. The author of this RISS HSA Report has no further actions or recommendations concerning the characterization of Building 763.

Note:
This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations. Information contained in this HSA only represents a "snapshot" in time. Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations, which may conflict with this report. However, this report will not be amended, and the newer data will take precedence over the data in the report. Newer Data will appear in the RLCR/PDSR.

Prepared By: Bob Sheets / Bob Sheets / 7/17/2001
Print Name / Signature / Date

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D&D RISS Facility Characterization
Historical Site Assessment Report

Facility ID: T900C – OU-2 Office Trailer/ Surface Water Treatment
Anticipated Facility Type (1, 2, or 3): Type 1

Refer to attached site drawing for facility location.
This facility specific Historical Site Assessment (HSA) has been performed in accordance with:
D&D Characterization Protocol, RFETS MAN-077-DDCP, latest version, and
Facility Disposition Program Manual, RFETS MAN-076-FDPM, latest version

Physical Description

T900C is a 48-foot long by 8-feet wide flat bed trailer, which was enclosed by a 9-foot high tube-steel structure. The sides of the structure have five four-foot double-wide doors for adding or removing equipment from the trailer bed There are doors on the west end and the northeast corner reached by metal steps. Insulation material in the structure walls is unknown as the doors have a wood frame attached to the perimeter of the doors and are covered with a thick textured, plastic, covering that is screwed to the frame. The underneath of the deck of the trailer is a foamed insulation material. The end panel insulation is foam insulation between aluminum sheets. Ceiling insulation could not be determined. The deck is painted diamond-plate steel. Inside the trailer on the east end there are electric panels and controls and a step down transformer for equipment that has been removed. On the south wall is a 3 ft W X 2 ½ ft D X 4-ft H hood that contains a drying oven. Exhaust for the hood is supplied by a portable air mover with a HEPA filter outside on the ground. On the south side is a circular lead shield for a counting detector on a steel table. Air conditioning is supplied by an air conditioning unit that is located on the ground at the southeast corner of the trailer. There are five liquid nitrogen dewars sitting on steel plates on the ground on the north side of the trailer.

Historical Operations

The trailer was brought on site in 1991and located northeast of what was Guard Post 900. Vessels of granular activated carbon were installed in the trailer to remove VOCs by adsorption from surface water sites, SWS 59, 61 and 132 located in OU 2 on the hillside north of the trailer. This operation lasted from 1991 to 1995 when the vessels were removed. It remained empty until 1998 when the hood, detector shield, and gamma spectroscopy equipment was installed to be used in support of the removal of Trench 1. Gamma spectroscopy procedures were also performed on ER samples from various sites around the plant. Gamma spectroscopy operations were concluded in 2000 and the gamma detection equipment was removed from the trailer. The hood and the detector shield were left in the trailer. Also in the trailer are three tables and chairs that were used to support gamma spectroscopy operations.

Current Operational Status

Currently there are no operations being conducted in the trailer. After the closure of Trench One Operations all the equipment used for gamma spectroscopy was removed with the exception of the lead-shielded detection chamber. Other remaining equipment in the trailer includes, three tables, chairs, the hood with a drying oven and the electrical controls and switchgear.

Contaminants of Concern

Asbestos

Describe any potential, likely, or known sources of Asbestos:
The trailer is not posted as being an ACM area.

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Beryllium (Be)
Describe any potential, likely, or known Be production or storage locations:
The trailer is not on the list of known Be containing areas.

Summarize any recent Be sampling results:
None.

Lead
Describe any potential, likely, or known sources of Lead (e.g., paint, shielding, etc.):
The only known source of lead is the commercial-built detector shield that is in the trailer.

RCRA/CERCLA Constituents
Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e.g., chemical storage, waste storage, processes):
VOC contaminated surface water was treated in the trailer. Trench One could have contained RCRA/CERCLA constituents.
Describe any potential, likely, or known spill locations (and sources, if any):
No known spill.

Describe methods in which spills were mitigated, if any:
N/A

PCBs
Describe any potential, likely, or known sources of PCBs (e.g., light ballasts, paints, equipment, etc.):
The fluorescent light ballast may contain PCB. The electrical switchgear and transformer are not labeled as containing PCBs.

Describe any potential, likely, or known spill locations (and sources, if any):
No known spill.

Describe methods in which spills were mitigated, if any:
N/A.

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D&D RISS Facility Characterization
Historical Site Assessment Report

Radiological Contaminants

Describe any potential, likely, or known radiological production or storage locations:
Surface water treated had very low levels of radioactivity prior to the addition of pre-treatment, which occurred in other trailers. Trench 1 materials were radiologically contaminated. The trailer has no radioactive postings on it.

Describe any potential, likely, or known spill locations (e.g., known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc.):
None.

Describe methods in which spills were mitigated, if any:
N/A.

Describe any potential, likely, or known isotopes of concern (e.g., weapons grade plutonium, uranium isotopes, pure beta emitters, mixed fission products, etc.):
The trailer analyzed samples that contained depleted uranium. Various gamma sources were also stored in the trailer.

Describe any potential, likely, or known external facility contamination (e.g., stack release points, unfiltered ventilation, facility's physical location to known site releases, etc.):

Environmental Restoration Concerns

Describe any ER concerns that could affect facility characterization (e.g., IHSSs, PACs, UBCs):
The facility does not sit or is listed as being on an IHSSs, PACs, or UBCs.
None.

Additional Information

Describe any additional information that may be useful during facility characterization (e.g., contaminant migration routes, waste handling operations, physical hazards, Historical Release Reports, WSRIC data, etc.):
The facility is not listed in the Historical Release Reports and has no WSRIC.

References

Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews). Attach all applicable supporting documentation:
Site IHSS, PAC, and UBC map; HRR list; and WSRIC list; and interviews.

Waste Volume Estimates and Material Types

Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM	Other Waste

NOTE: This trailer is expected to be returned to commerce.

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Further Actions
Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):
Start the RLC/PDS process.

Note:
This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations. Information contained in this HSA only represents a "snapshot" in time. Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations which may conflict with this report. However, this report will not be amended and the newer data will take precedence over the data in the report.

Prepared By:	Dean Burton	/s/ Dean A. Burton	07/30/01
	Print Name	Signature	Date

ATTACHMENT C

Radiological Data Summaries and Survey Maps

Summary of Radiological Survey Data for Group 10 Facilities

		Removable Activity (RA)				Total Surface Activity (TSA)			
		Alpha (dpm/100 cm^2)		Beta (dpm/100 cm^2)		Alpha (dpm/100 cm^2)		Beta (dpm/100 cm^2)	
	DCGL[1]	**20**		**1000**		**100**		**5000**	
	No. of Survey Measurements	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max**	**Min.**	**Max**
B125 Interior and Exterior (Survey Units G10004 & G10005)	47 random 45 biased 8 QC	-0.9	11.8	-30.0	44.0	-13.0	61.5	-804.0	688.2
B763 Interior and Exterior (Survey Units G10001 & G10002)	31 random 4 QC	-0.9	3.9	-26.0	42.0	-9.6	94.5	-719.1	814.2
T900C Interior and Exterior (Survey Unit G10003)	15 random 2 QC	-0.9	3.6	-32.0	38.0	-7.7	65.1	-521.4	157.5

[1] DCGL – Derived Concentration Guideline Level

Original survey data sheets and analytical data are contained in the Group 10 RLC files, including chain of custody and QC documentation.

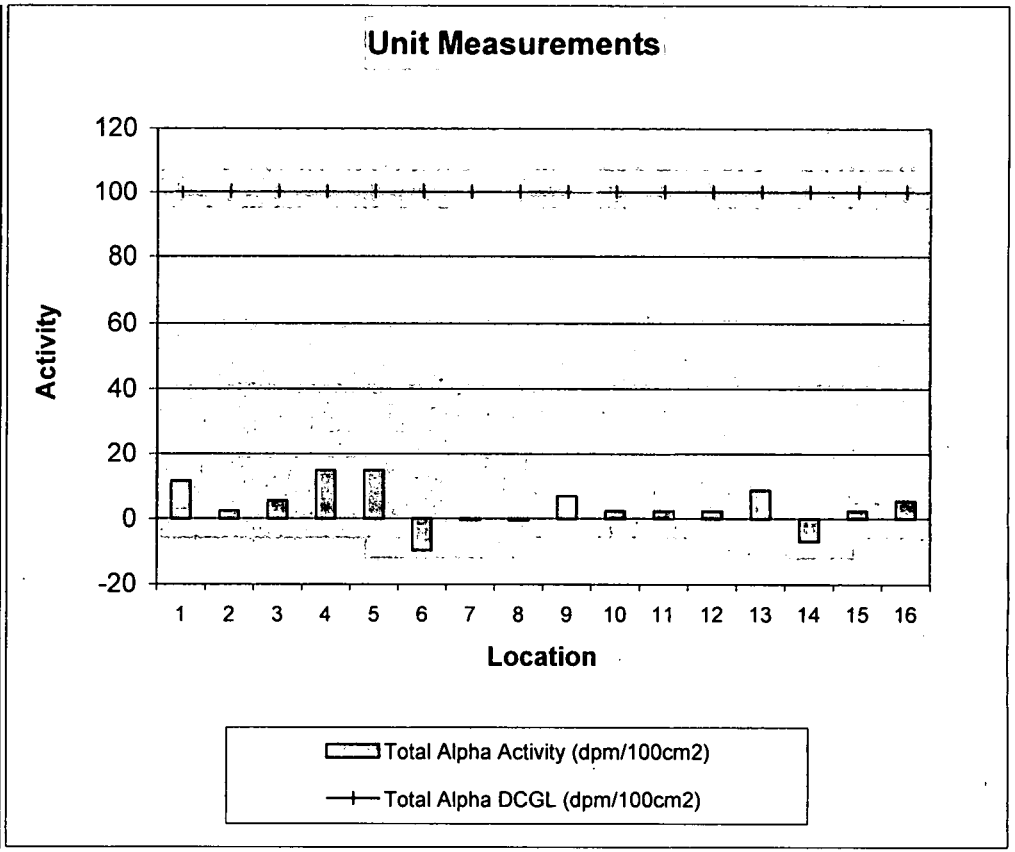
TSA Alpha

G10001

10/9/01

					1	2	
				Instrument:	394	1425	QC
std. Dev.:	6.7	max:	14.7	Ave. Inst. background:	2.8	3.0	cpm
mean:	3.9	min:	-9.6	Instrument efficiency:	21.80%	21.50%	
median:	2.4			Instrument MDA:	48	48	dpm

	Surface Location	Total Alpha Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Alpha Activity (dpm/100cm²)	Total Alpha DCGL (dpm/100cm²)
1	763 interior	5.3	2.0	11.5	100
2	763 interior	3.3	4.0	2.4	100
3	763 interior	4.0	0.7	5.6	100
4	763 interior	6.0	2.0	14.7	100
5	763 interior	6.0	4.0	14.7	100
6	763 interior	0.7	2.0	-9.6	100
7	763 interior	2.7	3.3	-0.4	100
8	763 interior	2.7	1.3	-0.4	100
9	763 interior	4.3	1.3	6.9	100
10	763 interior	3.3	2.7	2.4	100
11	763 interior	3.3	2.0	2.4	100
12	763 interior	3.3	6.0	2.4	100
13	763 interior	4.7	3.3	8.8	100
14	763 interior	1.3	2.0	-6.8	100
15	763 interior	3.3	4.7	2.4	100
16	763 interior	4.0	3.3	5.6	100
4 QC	763 interior	6.7	2.0	17.2	100
11 QC	763 interior	5.3	4.0	10.7	100



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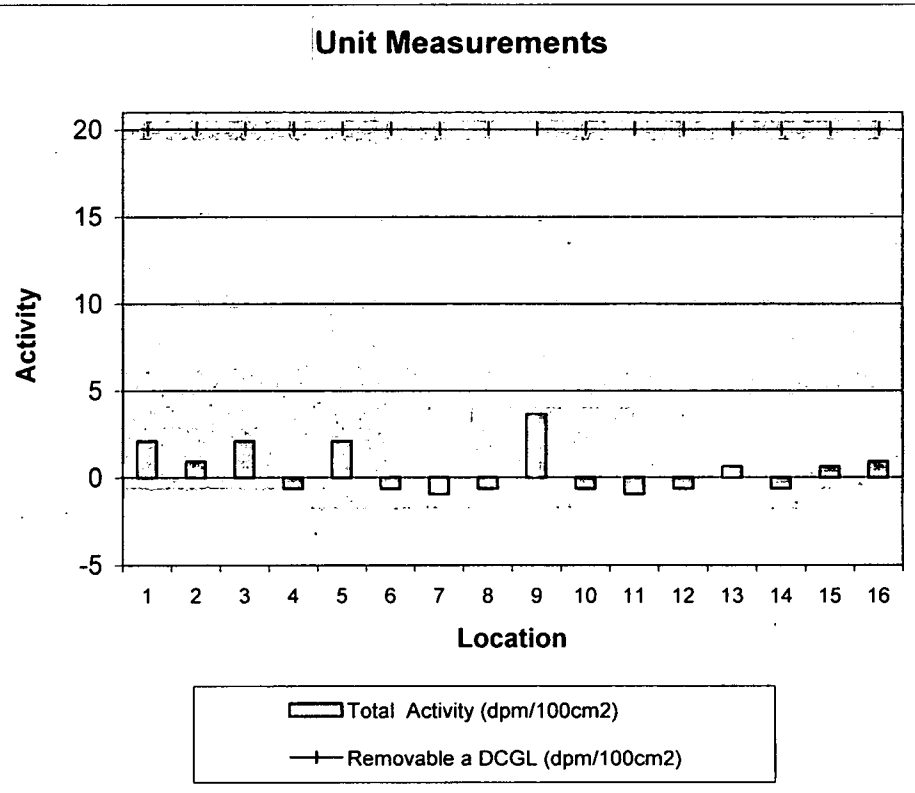
Removable Activity - Alpha

G10001

10/9/01

					1	2	
				Instrument:	966	770	
standard deviation:	1.4	max:	3.6	Instrument background:	0.3	0.2	cpm
mean:	0.5	min:	-0.9	Instrument efficiency:	33.0%	33.0%	
median:	0.0			Instrument MDA:	10.0	10.0	dpm

	Surface Location	Total Counts (cpm/100cm²)	Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Removable α DCGL (dpm/100cm²)
1	763 interior	1.0	0.3	2.1	20
2	763 interior	0.5	0.2	0.9	20
3	763 interior	1.0	0.3	2.1	20
4	763 interior	0.0	0.2	-0.6	20
5	763 interior	1.0	0.3	2.1	20
6	763 interior	0.0	0.2	-0.6	20
7	763 interior	0.0	0.3	-0.9	20
8	763 interior	0.0	0.2	-0.6	20
9	763 interior	1.5	0.3	3.6	20
10	763 interior	0.0	0.2	-0.6	20
11	763 interior	0.0	0.3	-0.9	20
12	763 interior	0.0	0.2	-0.6	20
13	763 interior	0.5	0.3	0.6	20
14	763 interior	0.0	0.2	-0.6	20
15	763 interior	0.5	0.3	0.6	20
16	763 interior	0.5	0.2	0.9	20



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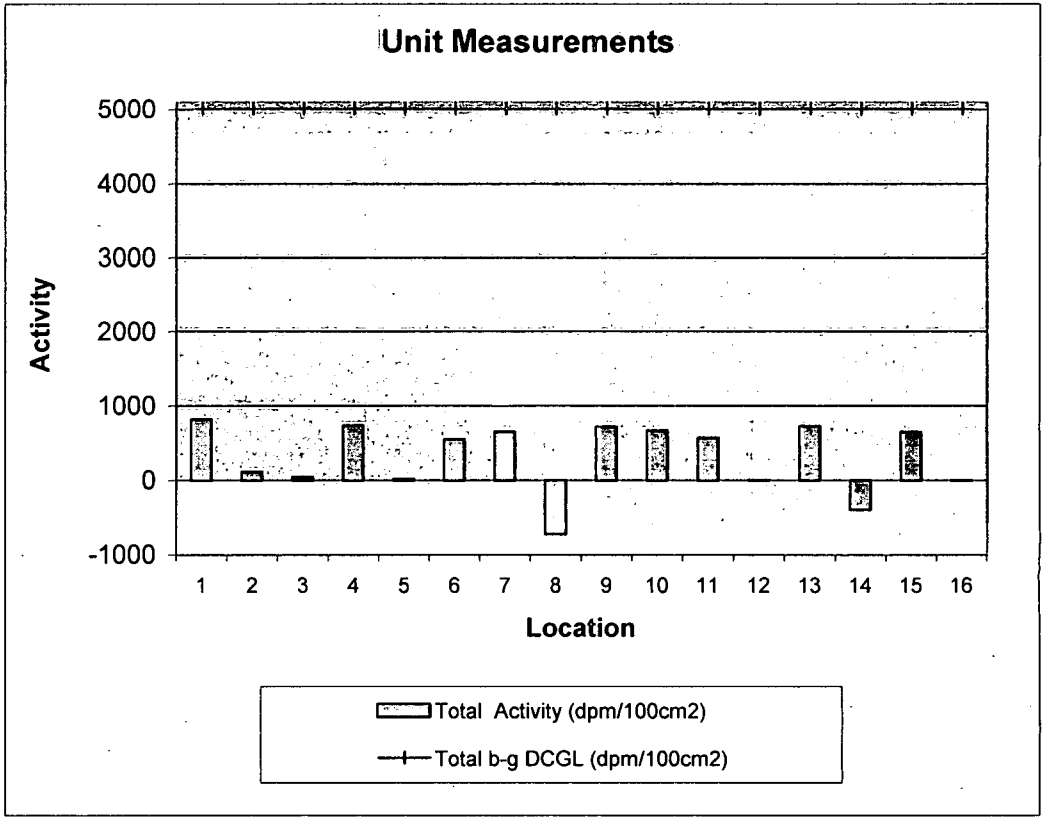
TSA Beta-Gamma

G10001

10/9/01

					1	2	
				Instrument:	394	1425	QC
std. Dev.:	459.8	max:	814.2	Ave. Inst. background:	639.9	639.9	cpm
mean:	318.6	min:	-719.1	Instrument efficiency:	28.50%	31.10%	
median:	556.3			Instrument MDA:	48	48	dpm

	Surface Location	Total Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Total β–γ DCGL (dpm/100cm²)
1	763 interior	872	701	814.2	5000
2	763 interior	672	685	112.5	5000
3	763 interior	653	550	45.8	5000
4	763 interior	848	700	730.0	5000
5	763 interior	645	532	17.7	5000
6	763 interior	796	740	547.6	5000
7	763 interior	823	613	642.3	5000
8	763 interior	435	503	-719.1	5000
9	763 interior	843	706	712.5	5000
10	763 interior	828	668	659.8	5000
11	763 interior	801	662	565.1	5000
12	763 interior	641	488	3.7	5000
13	763 interior	846	678	723.0	5000
14	763 interior	527	582	-396.3	5000
15	763 interior	823	667	642.3	5000
16	763 interior	639	528	-3.3	5000
4 QC	763 interior	957	751	1019.5	5000
11 QC	763 interior	783	765	460.0	5000



Removable Activity - Beta-Gamma

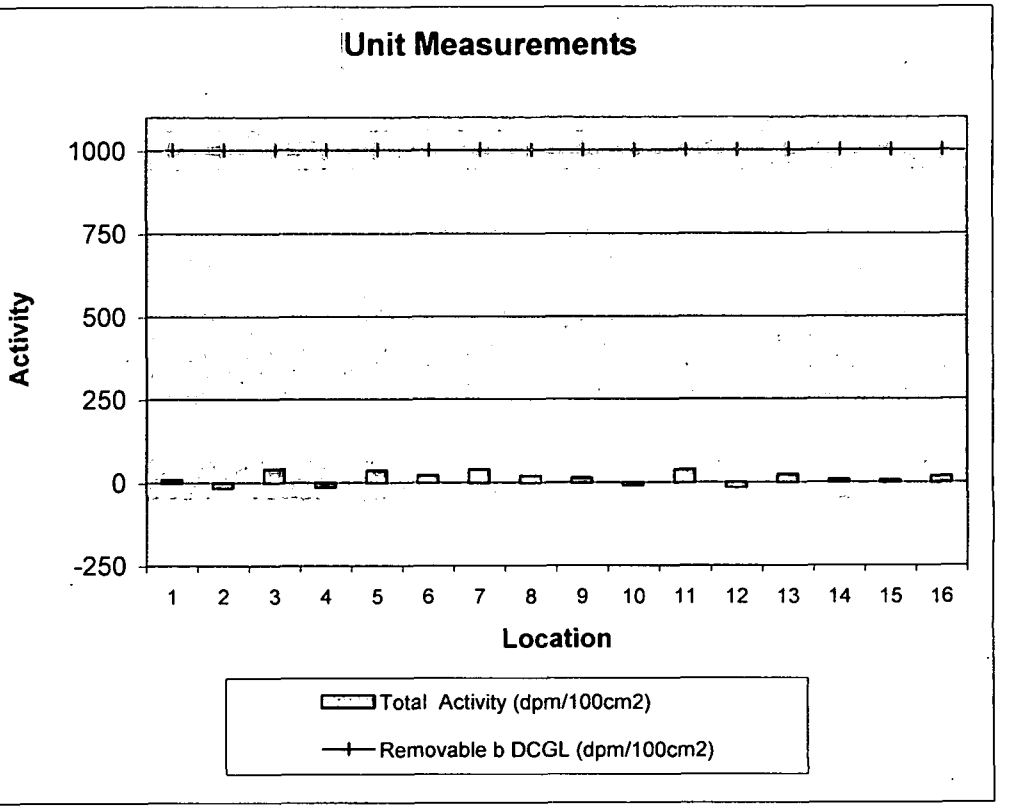
G10001

10/9/01

standard deviation:	18.8	max:	40.0
mean:	13.8	min:	-14.0
median:	16.0		

	3	4	
Instument:	905	700	
Instrument background:	35.0	32.0	cpm
Instrument efficiency:	25.0%	25.0%	
Instrument MDA:	41.9	40.2	dpm

	Surface Location	Total Counts (cpm/100cm²)	Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Removable β DCGL (dpm/100cm²)
1	763 interior	37.5	35.0	10.0	1000
2	763 interior	28.5	32.0	-14.0	1000
3	763 interior	45.0	35.0	40.0	1000
4	763 interior	29.0	32.0	-12.0	1000
5	763 interior	44.0	35.0	36.0	1000
6	763 interior	37.0	32.0	20.0	1000
7	763 interior	44.5	35.0	38.0	1000
8	763 interior	36.5	32.0	18.0	1000
9	763 interior	38.5	35.0	14.0	1000
10	763 interior	30.0	32.0	-8.0	1000
11	763 interior	44.5	35.0	38.0	1000
12	763 interior	28.5	32.0	-14.0	1000
13	763 interior	40.5	35.0	22.0	1000
14	763 interior	34.0	32.0	8.0	1000
15	763 interior	36.5	35.0	6.0	1000
16	763 interior	36.5	32.0	18.0	1000



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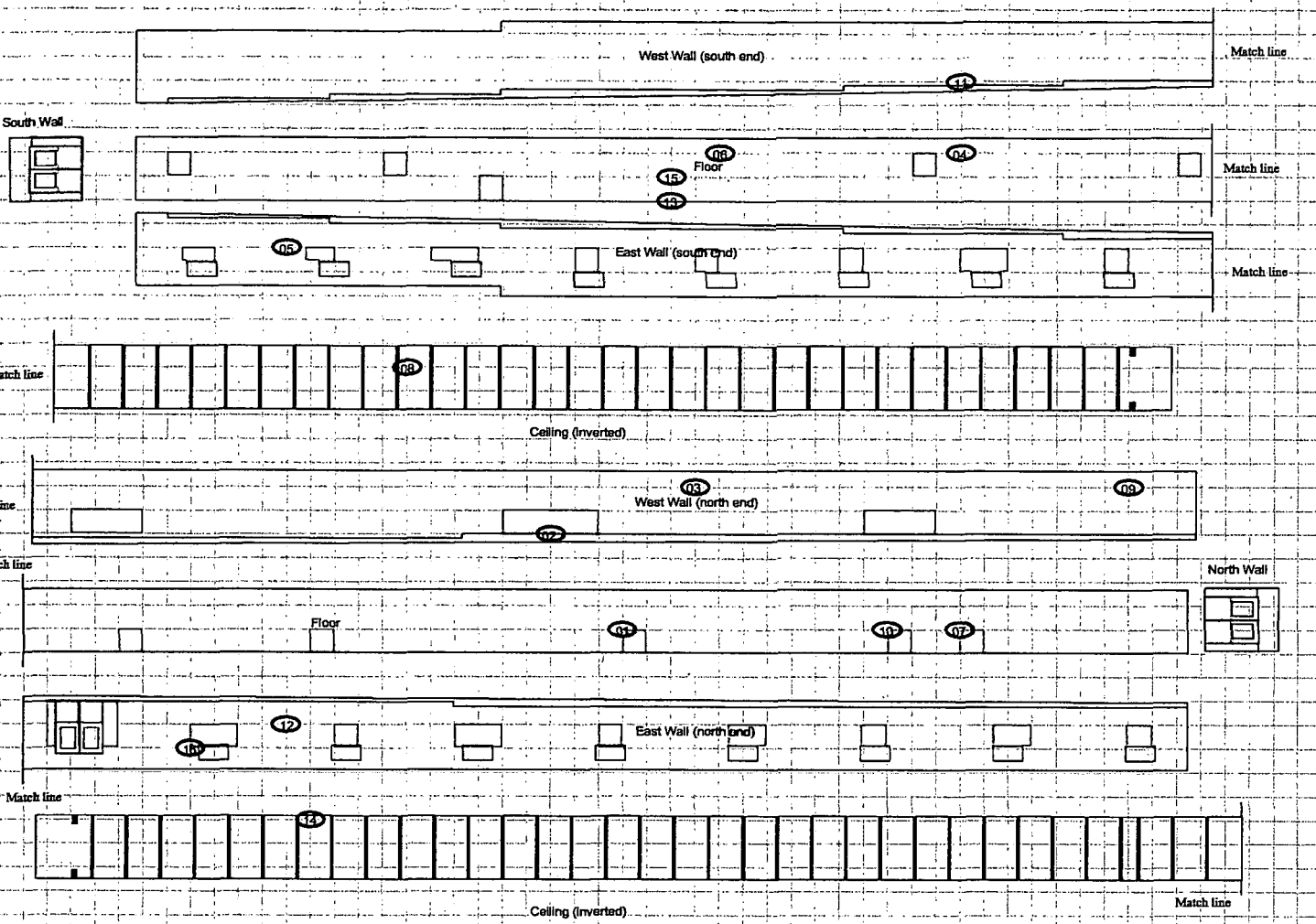
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: **Survey Unit:** **Classification: 3**
Building: 763
Survey Unit Description: Interior

Total Floor Area: NA **Total Area: 1042 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 1 OF 1



Scan Areas

SURVEY MAP LEGEND
- Smear & TSC Location
- Smear, TSC & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

0 FEET 30
0 METERS 10

N

37

TSA Alpha

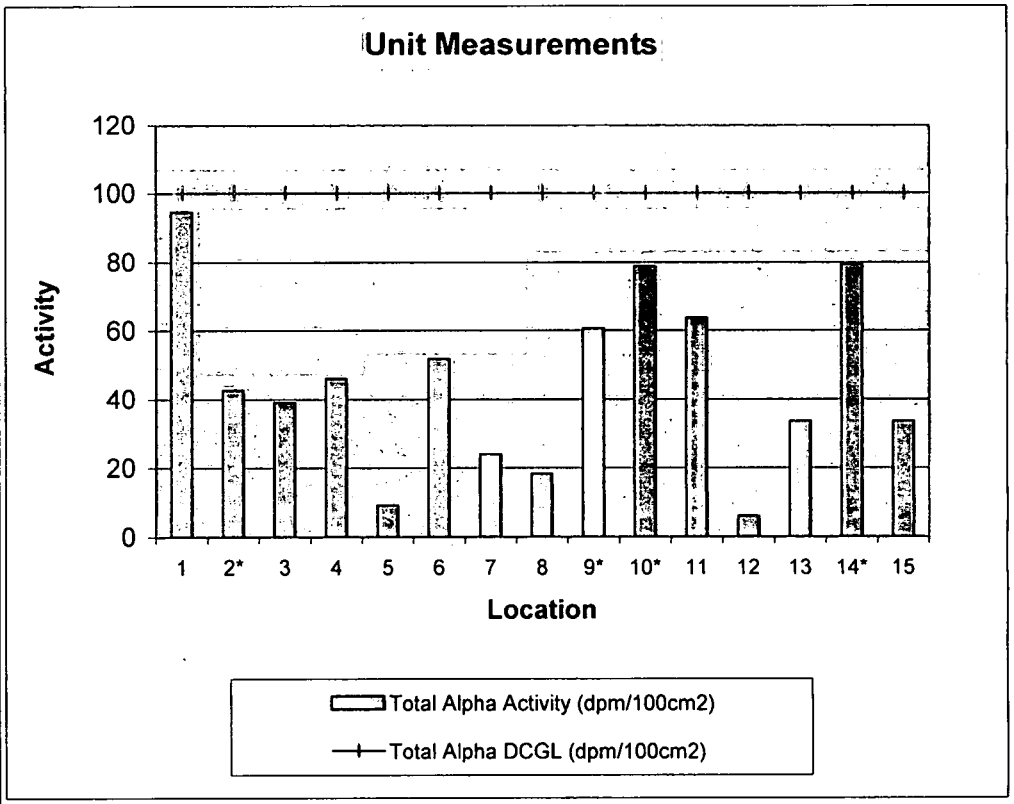
G10002

10/8/01

					1	2	3	
				Instrument:	3114	394	1425	QC
std. Dev.:	26.3	max:	94.5	Ave. Inst. background:	2.7	2.7	3.7	cpm
mean:	45.4	min:	5.9	Instrument efficiency:	22.00%	21.80%	21.50%	
median:	42.7			Instrument MDA:	48	48	48	dpm

	Surface Location	Total Alpha Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Alpha Activity (dpm/100cm²)	Total Alpha DCGL (dpm/100cm²)
1	763 Exterior	23.3	0.7	94.5	100
2*	763 Exterior	12.0	1.3	42.7	100
3	763 Exterior	11.3	5.3	39.1	100
4	763 Exterior	12.7	1.3	45.9	100
5	763 Exterior	4.7	1.3	9.2	100
6	763 Exterior	14.0	1.3	51.8	100
7	763 Exterior	8.0	3.3	24.1	100
8	763 Exterior	6.7	5.3	18.2	100
9*	763 Exterior	16.0	4.0	60.5	100
10*	763 Exterior	20.0	2.0	78.6	100
11	763 Exterior	16.7	2.7	63.6	100
12	763 Exterior	4.0	5.3	5.9	100
13	763 Exterior	10.0	0.7	33.5	100
14*	763 Exterior	20.0	1.3	79.4	100
15	763 Exterior	10.0	4.7	33.5	100
8 QC	763 Exterior	8.7	1.3	23.5	100
13 QC	763 Exterior	6.7	6.0	14.2	100

* Locations are investigative recounts.



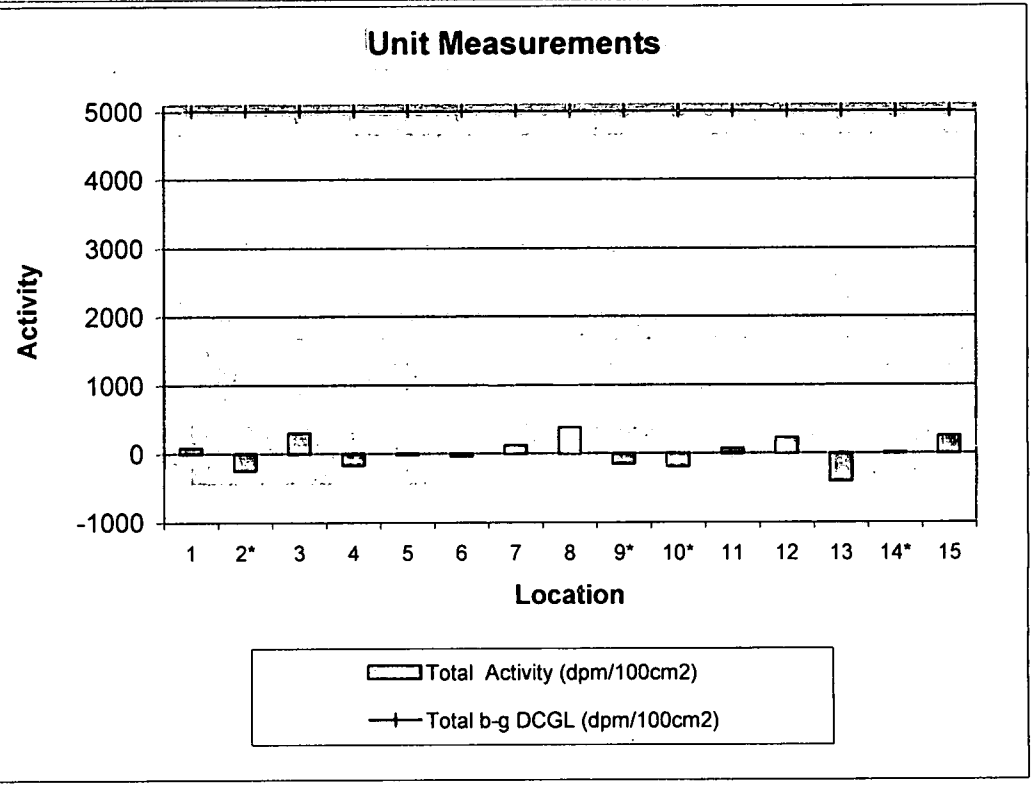
TSA Beta-Gamma

G10002

1/0/00

					1	2	3
				Instrument:	3114	394	1425 QC
std. Dev.:	218.7	max:	382.0	Ave. Inst. background:	560.2	560.2	654.0 cpm
mean:	18.1	min:	-400.8	Instrument efficiency:	32.40%	28.50%	31.10%
median:	9.7			Instrument MDA:	253	263	260 dpm

	Surface Location	Total Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Total β–γ DCGL (dpm/100cm²)
1	763 Exterior	585	482	86.9	5000
2*	763 Exterior	493	487	-235.9	5000
3	763 Exterior	657	769	298.7	5000
4	763 Exterior	514	461	-162.2	5000
5	763 Exterior	557	492	-11.4	5000
6	763 Exterior	551	546	-32.4	5000
7	763 Exterior	599	469	119.6	5000
8	763 Exterior	684	725	382.0	5000
9*	763 Exterior	513	443	-145.8	5000
10*	763 Exterior	501	479	-182.8	5000
11	763 Exterior	583	557	70.3	5000
12	763 Exterior	633	764	224.6	5000
13	763 Exterior	446	446	-400.8	5000
14*	763 Exterior	563	540	9.7	5000
15	763 Exterior	632	556	251.8	5000
8 QC	763 Exterior	717	717	202.6	5000
13 QC	763 Exterior	591	591	-202.6	5000



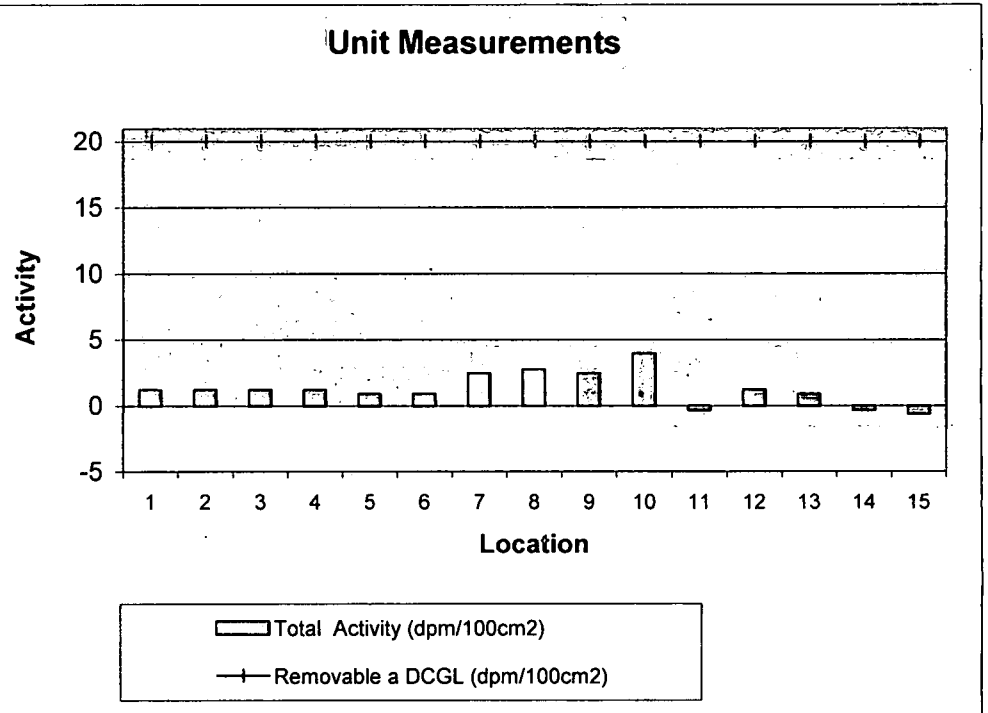
Removable Activity - Alpha

G10002

10/8/01

					1	2	
				Instrument:	966	770	
standard deviation:	1.2	max:	3.9	Instrument background:	0.1	0.2	cpm
mean:	1.3	min:	-0.6	Instrument efficiency:	33.0%	33.0%	
median:	1.2			Instrument MDA:	10.0	10.0	dpm

	Surface Location	Total Counts (cpm/100cm^2)	Bkgd (cpm/100cm^2)	Total Activity (dpm/100cm^2)	Removable α DCGL (dpm/100cm^2)
1	763 Exterior	0.5	0.1	1.2	20
2	763 Exterior	0.5	0.1	1.2	20
3	763 Exterior	0.5	0.1	1.2	20
4	763 Exterior	0.5	0.1	1.2	20
5	763 Exterior	0.5	0.2	0.9	20
6	763 Exterior	0.5	0.2	0.9	20
7	763 Exterior	1.0	0.2	2.4	20
8	763 Exterior	1.0	0.1	2.7	20
9	763 Exterior	1.0	0.2	2.4	20
10	763 Exterior	1.5	0.2	3.9	20
11	763 Exterior	0.0	0.1	-0.3	20
12	763 Exterior	0.5	0.1	1.2	20
13	763 Exterior	0.5	0.2	0.9	20
14	763 Exterior	0.0	0.1	-0.3	20
15	763 Exterior	0.0	0.2	-0.6	20



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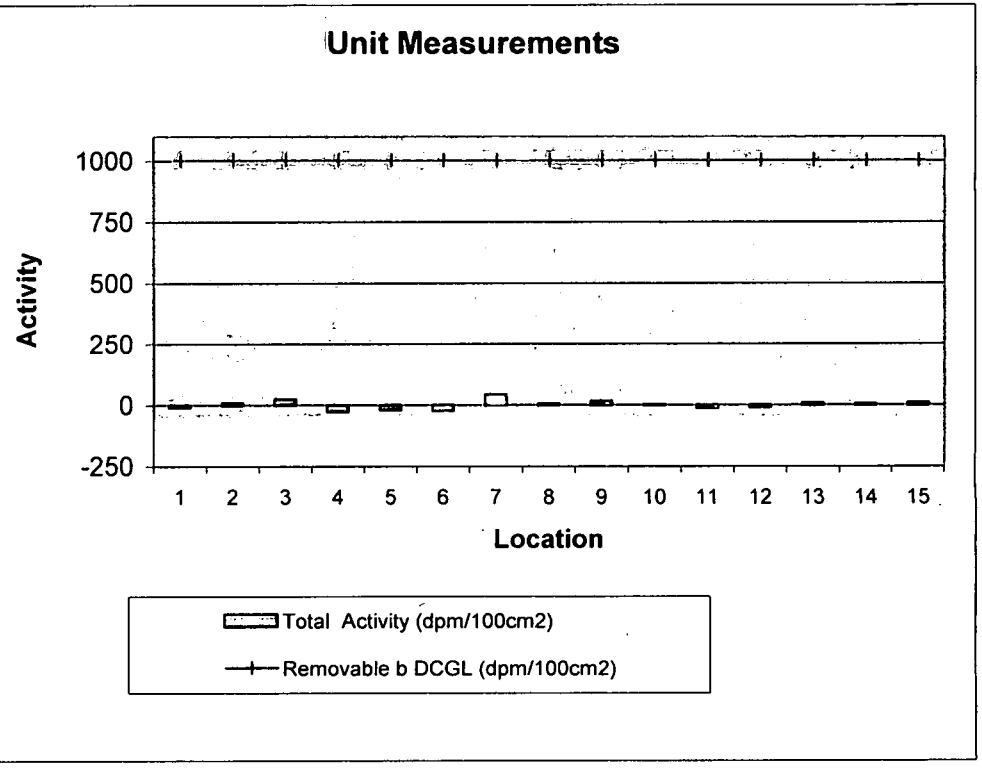
Removable Activity - Beta-Gamma

G10002

10/8/01

					3	4	
				Instument:	905	700	
standard deviation:	17.9	max:	42.0	Instrument background:	40.0	32.0	cpm
mean:	1.9	min:	-26.0	Instrument efficiency:	25.0%	25.0%	
median:	4.0			Instrument MDA:	44.5	40.2	dpm

	Surface Location	Total Counts (cpm/100cm^2)	Bkgd (cpm/100cm^2)	Total Activity (dpm/100cm^2)	Removable β DCGL (dpm/100cm^2)
1	763 Exterior	38.0	40.0	-8.0	1000
2	763 Exterior	42.0	40.0	8.0	1000
3	763 Exterior	46.0	40.0	24.0	1000
4	763 Exterior	33.5	40.0	-26.0	1000
5	763 Exterior	27.5	32.0	-18.0	1000
6	763 Exterior	27.0	32.0	-20.0	1000
7	763 Exterior	42.5	32.0	42.0	1000
8	763 Exterior	41.5	40.0	6.0	1000
9	763 Exterior	36.0	32.0	16.0	1000
10	763 Exterior	32.5	32.0	2.0	1000
11	763 Exterior	37.0	40.0	-12.0	1000
12	763 Exterior	38.0	40.0	-8.0	1000
13	763 Exterior	34.0	32.0	8.0	1000
14	763 Exterior	41.0	40.0	4.0	1000
15	763 Exterior	34.5	32.0	10.0	1000



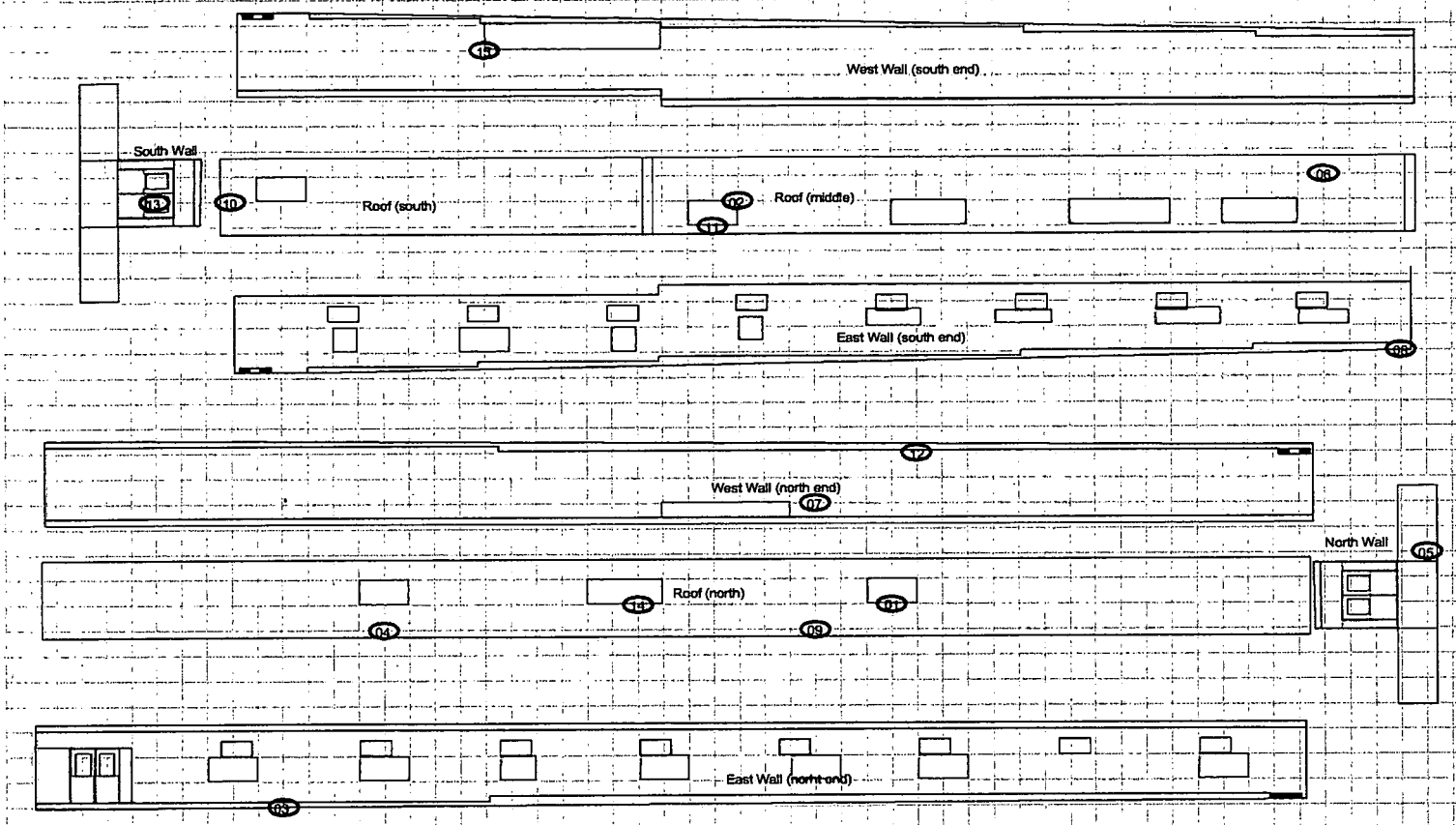
4/1

RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: **Survey Unit:** **Classification: 3**
Building: 763
Survey Unit Description: Exterior

Total Floor Area: NA **Total Area: 951 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 1 OF 1



Scan Areas

SURVEY MAP LEGEND
- Smear & TSC Location
- Smear, TSC & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

0 FEET 30
0 METERS 10

N

42

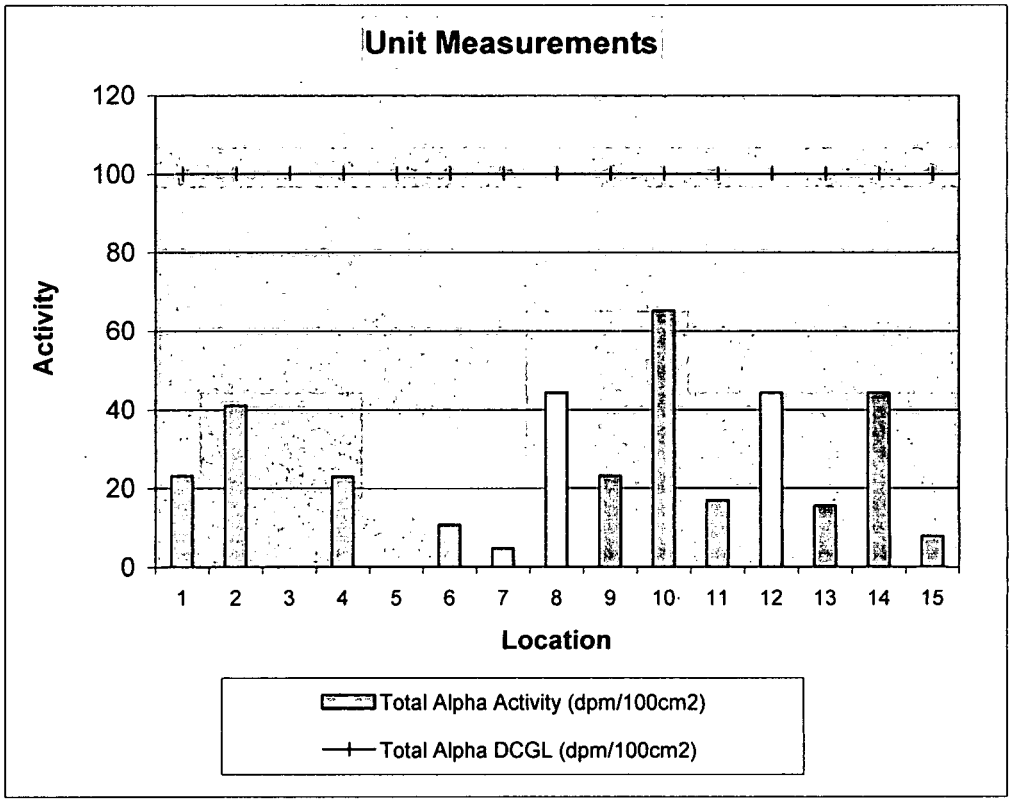
TSA Alpha

G10003

10/19/01

					1	2	3
				Instrument:	3114	394 QC	394
std. Dev.:	20.9	max:	65.1	Ave. Inst. background:	3.0	2.4 cpm	3.0 cpm
mean:	23.2	min:	-7.7	Instrument efficiency:	22.00%	21.80%	21.80%
median:	22.8			Instrument MDA:	48	48 dpm	48 dpm

	Surface Location	Total Alpha Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Alpha Activity (dpm/100cm²)	Total Alpha DCGL (dpm/100cm²)
1	T900C Int & Ext	8.0	1.3	23.0	100
2	T900C Int & Ext	12.0	4.0	41.0	100
3	T900C Int & Ext	1.3	1.3	-7.7	100
4	T900C Int & Ext	8.0	2.7	22.8	100
5	T900C Int & Ext	1.3	0.0	-7.7	100
6	T900C Int & Ext	5.3	4.0	10.6	100
7	T900C Int & Ext	4.0	0.7	4.7	100
8	T900C Int & Ext	12.7	4.0	44.2	100
9	T900C Int & Ext	8.0	2.0	23.0	100
10	T900C Int & Ext	17.3	0.0	65.1	100
11	T900C Int & Ext	6.7	6.0	16.9	100
12	T900C Int & Ext	12.7	6.7	44.2	100
13	T900C Int & Ext	6.4	7.3	15.5	100
14	T900C Int & Ext	12.7	4.7	44.2	100
15	T900C Int & Ext	4.7	0.0	7.9	100
11 QC	T900C Int & Ext	3.3	2.7	4.4	100
4 QC	T900C Int & Ext	1.3	2.0	-4.8	100



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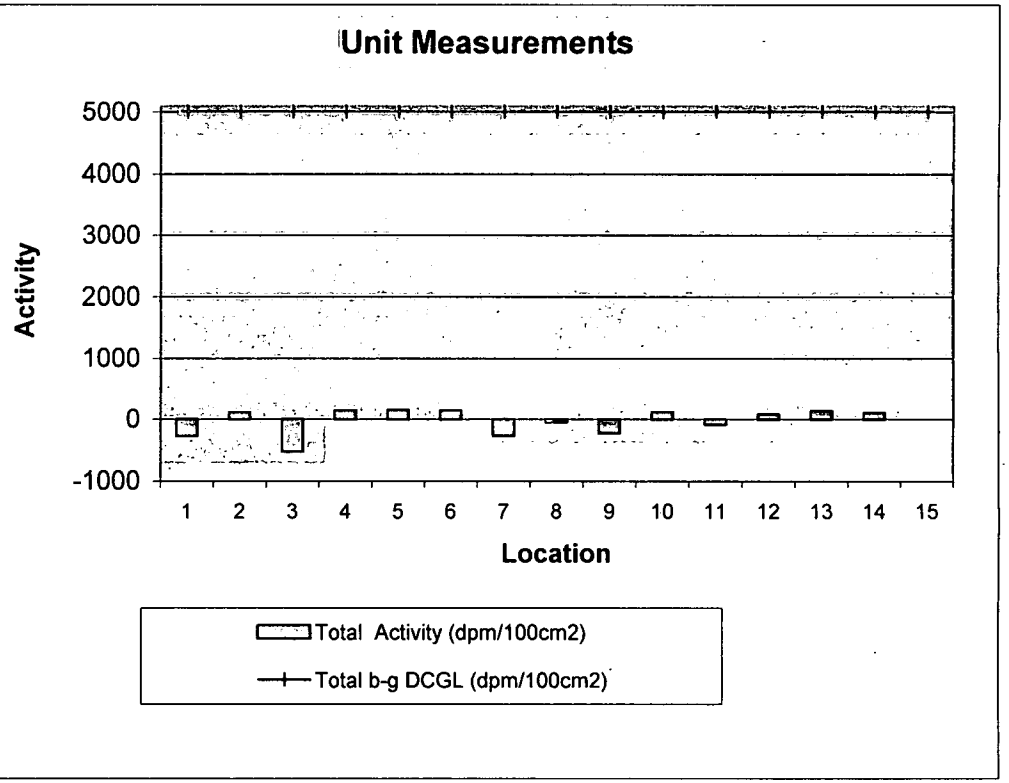
TSA Beta-Gamma

G10003

10/19/01

					1	2	3
				Instrument:	3114	394 QC	394
std. Dev.:	206.1	max:	157.5	Ave. Inst. background:	370.7	347.0 cpm	370.7 cpm
mean:	-23.6	min:	-521.4	Instrument efficiency:	22.00%	21.80%	21.80%
median:	87.9			Instrument MDA:	48	48 dpm	48 dpm

	Surface Location	Total Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Total β–γ DCGL (dpm/100cm²)
1	T900C Int & Ext	313	308	-264.5	5000
2	T900C Int & Ext	396	391	115.2	5000
3	T900C Int & Ext	257	326	-521.4	5000
4	T900C Int & Ext	403	423	147.0	5000
5	T900C Int & Ext	405	423	157.5	5000
6	T900C Int & Ext	403	315	148.3	5000
7	T900C Int & Ext	314	315	-259.9	5000
8	T900C Int & Ext	361	431	-43.9	5000
9	T900C Int & Ext	323	325	-218.7	5000
10	T900C Int & Ext	398	397	124.2	5000
11	T900C Int & Ext	353	411	-80.3	5000
12	T900C Int & Ext	390	380	87.9	5000
13	T900C Int & Ext	402	371	142.4	5000
14	T900C Int & Ext	395	391	110.6	5000
15	T900C Int & Ext	371	353	1.5	5000
11 QC	T900C Int & Ext	310	305	-169.7	5000
4 QC	T900C Int & Ext	386	389	178.9	5000



44

Removable Activity - Alpha

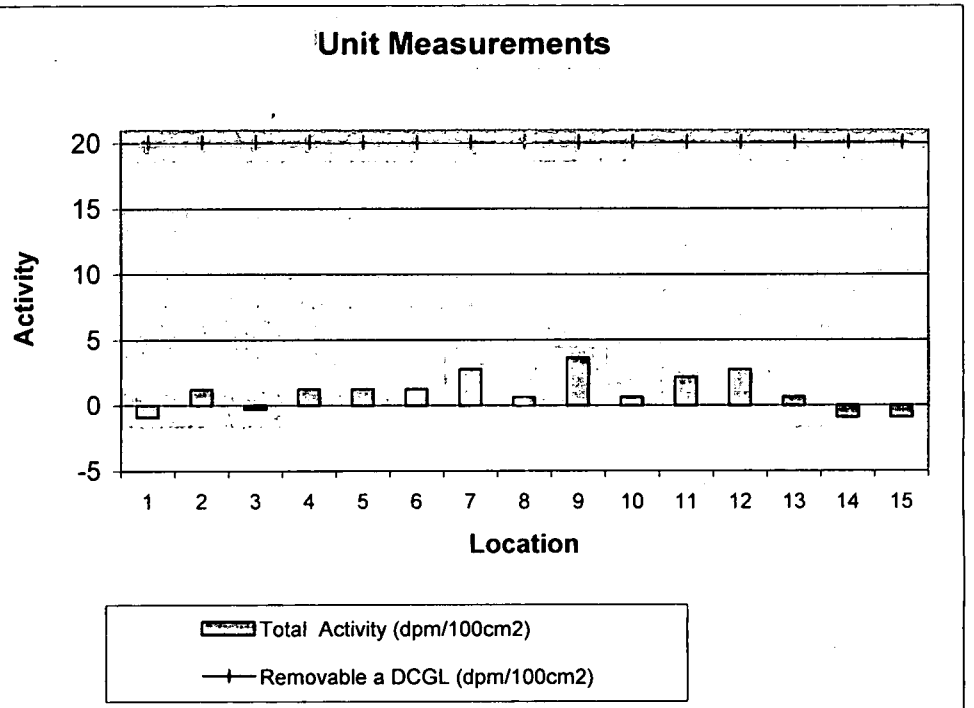
G10003

10/19/01

standard deviation:	1.4	max:	3.6
mean:	1.0	min:	-0.9
median:	1.2		

Instrument:	966	770
Instrument background:	0.3	0.1 cpm
Instrument efficiency:	33.0%	33.0%
Instrument MDA:	7.8	6.2 dpm

	Surface Location	Total Counts (cpm/100cm²)	Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Removable α DCGL (dpm/100cm²)
1	T900C Int & Ext	0.0	0.3	-0.9	20
2	T900C Int & Ext	0.5	0.1	1.2	20
3	T900C Int & Ext	0.0	0.1	-0.3	20
4	T900C Int & Ext	0.5	0.1	1.2	20
5	T900C Int & Ext	0.5	0.1	1.2	20
6	T900C Int & Ext	0.5	0.1	1.2	20
7	T900C Int & Ext	1.0	0.1	2.7	20
8	T900C Int & Ext	0.5	0.3	0.6	20
9	T900C Int & Ext	1.5	0.3	3.6	20
10	T900C Int & Ext	0.5	0.3	0.6	20
11	T900C Int & Ext	1.0	0.3	2.1	20
12	T900C Int & Ext	1.0	0.1	2.7	20
13	T900C Int & Ext	0.5	0.3	0.6	20
14	T900C Int & Ext	0.0	0.3	-0.9	20
15	T900C Int & Ext	0.0	0.3	-0.9	20



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Removable Activity - Beta-Gamma

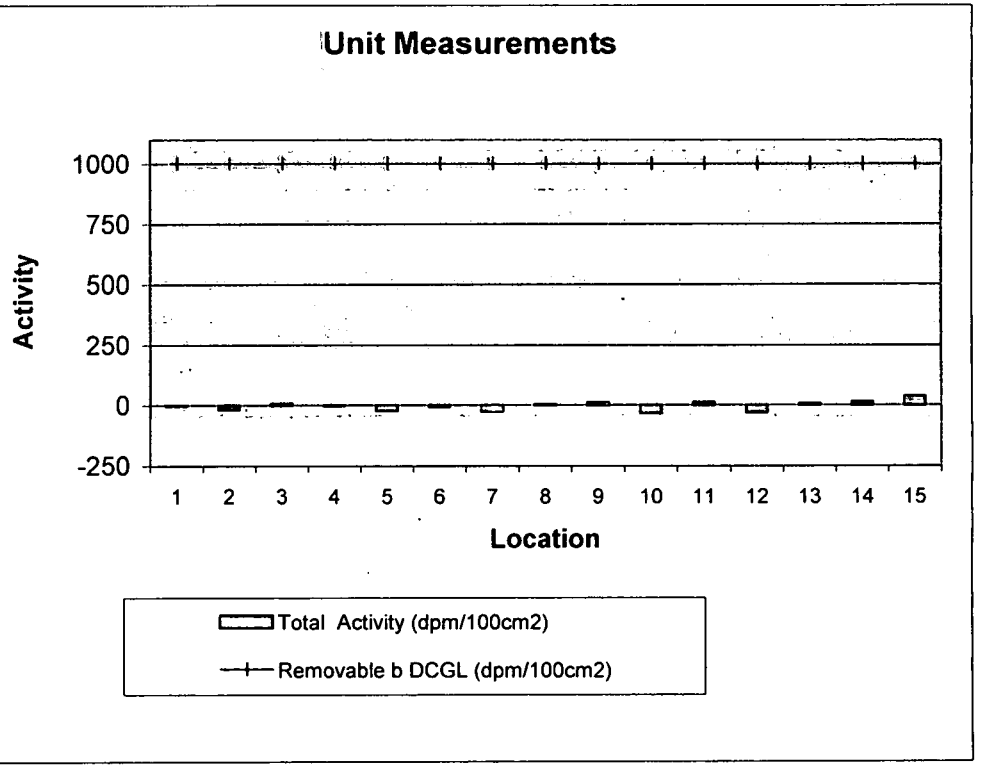
G10003

10/18/01

standard deviation:	19.3	max:	38.0
mean:	-3.2	min:	-32.0
median:	-2.0		

Instument:	966	770
Instrument background:	37.0	35.0 cpm
Instrument efficiency:	25.0%	25.0%
Instrument MDA:	42.9	41.9 dpm

	Surface Location	Total Counts (cpm/100cm^2)	Bkgd (cpm/100cm^2)	Total Activity (dpm/100cm^2)	Removable β DCGL (dpm/100cm^2)
1	T900C Int & Ext	36.5	37.0	-2.0	1000
2	T900C Int & Ext	31.0	35.0	-16.0	1000
3	T900C Int & Ext	36.5	35.0	6.0	1000
4	T900C Int & Ext	34.5	35.0	-2.0	1000
5	T900C Int & Ext	29.5	35.0	-22.0	1000
6	T900C Int & Ext	33.5	35.0	-6.0	1000
7	T900C Int & Ext	28.5	35.0	-26.0	1000
8	T900C Int & Ext	37.5	37.0	2.0	1000
9	T900C Int & Ext	39.5	37.0	10.0	1000
10	T900C Int & Ext	29.0	37.0	-32.0	1000
11	T900C Int & Ext	40.0	37.0	12.0	1000
12	T900C Int & Ext	27.5	35.0	-30.0	1000
13	T900C Int & Ext	38.5	37.0	6.0	1000
14	T900C Int & Ext	40.5	37.0	14.0	1000
15	T900C Int & Ext	46.5	37.0	38.0	1000



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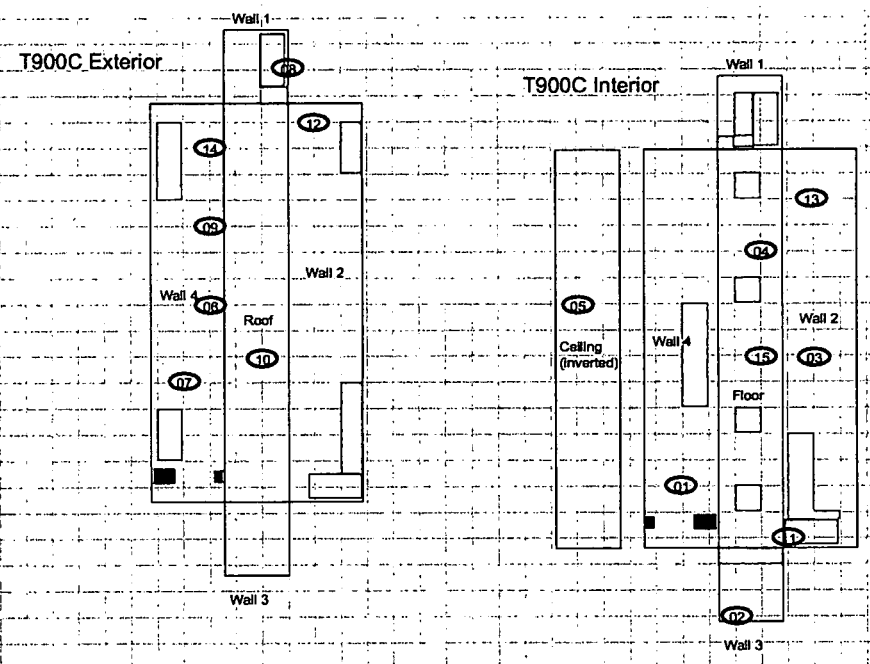
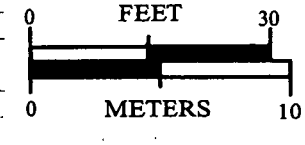
RADIOLOGICAL CLOSEOUT SURVEY FOR

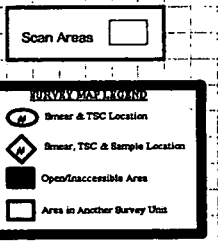
Survey Area: **Survey Unit: G10003** **Classification: 3**
Building: T900C
Survey Unit Description: Interior/Exterior

Total Floor Area: 37 sq. m **Total Area: 346 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 1 OF 1







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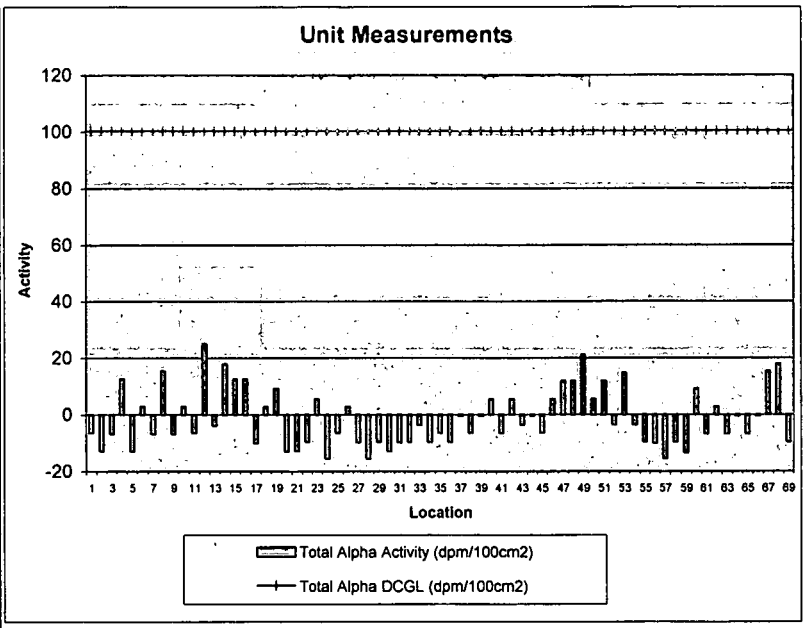
TSA Alpha

G10004

10/30/01

					1	2	3	4	5 QC	
				Instrument:	1425	394	394	1379	1136	
std. Dev.:	11.6	max:	25.1	Ave. Inst. background:	4.1	4.1	4.1	4.1	4.4	cpm
mean:	0.3	min:	-13.0	Instrument efficiency:	21.50%	21.80%	21.80%	20.80%	21.10%	
median:	-5.1			Instrument MDA:	48	48	48	48	48	dpm

	Surface Location	Total Alpha Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Alpha Activity (dpm/100cm²)	Total Alpha DCGL (dpm/100cm²)
1	B125 Interior (random)	2.7	11.3	-6.4	100
2	B125 Interior (random)	1.3	4.0	-12.8	100
3	B125 Interior (random)	2.7	2.7	-6.7	100
4	B125 Interior (random)	6.7	2.7	12.6	100
5	B125 Interior (random)	1.3	4.7	-12.8	100
6	B125 Interior (random)	4.7	4.0	2.9	100
7	B125 Interior (random)	2.7	2.0	-6.7	100
8	B125 Interior (random)	7.3	6.0	15.4	100
9	B125 Interior (random)	2.7	0.7	-6.7	100
10	B125 Interior (random)	4.7	4.0	2.8	100
11	B125 Interior (random)	2.7	2.7	-6.4	100
12	B125 Interior (random)	9.3	3.3	25.1	100
13	B125 Interior (random)	3.3	2.0	-3.8	100
14	B125 Interior (random)	8.0	4.0	17.9	100
15	B125 Interior (random)	6.7	3.3	12.6	100
16	B125 Interior (random)	6.7	8.0	12.6	100
17	B125 Interior (random)	2.0	3.3	-10.0	100
18	B125 Interior (random)	4.7	7.3	2.8	100
19	B125 Interior (random)	6.0	4.7	9.2	100
20	B125 Interior (random)	1.3	2.0	-13.0	100
21	B125 Interior (random)	1.3	8.0	-12.8	100
22	B125 Interior (random)	2.0	4.0	-9.6	100
4 QC	B125 Interior (random)	5.3	4.0	4.5	100
14 QC	B125 Interior (random)	8.0	4.7	17.3	100
23	B125 Interior (biased)	5.3	3.3	5.6	100
24	B125 Interior (biased)	0.7	2.7	-15.5	100
25	B125 Interior (biased)	2.7	3.3	-6.4	100
26	B125 Interior (biased)	4.7	4.0	2.8	100
27	B125 Interior (biased)	2.0	3.3	-9.7	100
28	B125 Interior (biased)	0.7	2.0	-15.5	100
29	B125 Interior (biased)	2.0	4.7	-9.6	100
30	B125 Interior (biased)	1.3	1.3	-13.0	100
31	B125 Interior (biased)	2.0	2.0	-9.7	100
32	B125 Interior (biased)	2.0	5.3	-9.6	100
33	B125 Interior (biased)	3.3	5.3	-3.6	100
34	B125 Interior (biased)	2.0	2.7	-9.6	100
35	B125 Interior (biased)	2.7	6.0	-6.4	100
36	B125 Interior (biased)	2.0	4.7	-9.6	100
37	B125 Interior (biased)	4.0	3.3	-0.4	100
38	B125 Interior (biased)	2.7	4.7	-6.4	100
39	B125 Interior (biased)	4.0	4.7	-0.4	100
40	B125 Interior (biased)	5.3	4.7	5.6	100
41	B125 Interior (biased)	2.7	6.7	-6.4	100
42	B125 Interior (biased)	5.3	3.3	5.6	100
43	B125 Interior (biased)	3.3	3.3	-3.6	100
44	B125 Interior (biased)	4.0	6.7	-0.4	100
45	B125 Interior (biased)	2.7	4.7	-6.4	100
23 QC	B125 Interior (random)	0.7	4.7	-15.8	100
26 QC	B125 Interior (random)	3.3	4.0	-3.6	100



	Surface Location	Total Alpha Counts (cpm/100cm2)	Local Area Bkgd (cpm/100cm2)	Total Alpha Activity (dpm/100cm2)	Total Alpha DCGL (dpm/100cm2)
46	B125 Interior (biased)	5.3	4.0	5.6	100
47	B125 Interior (biased)	6.7	6.0	12.0	100
48	B125 Interior (biased)	6.7	8.7	12.0	100
49	B125 Interior (biased)	8.7	4.7	21.2	100
50	B125 Interior (biased)	5.3	10.0	5.6	100
51	B125 Interior (biased)	6.7	4.0	12.0	100
52	B125 Interior (biased)	3.3	7.3	-3.6	100
53	B125 Interior (biased)	7.3	3.3	14.7	100
54	B125 Interior (biased)	3.3	2.0	-3.6	100
55	B125 Interior (biased)	2.0	2.7	-9.6	100
56	B125 Interior (biased)	2.0	4.0	-10.0	100
57	B125 Interior (biased)	0.7	2.0	-15.5	100
58	B125 Interior (biased)	2.0	2.7	-9.6	100
59	B125 Interior (biased)	1.3	0.7	-13.4	100
60	B125 Interior (biased)	6.0	3.3	9.2	100
61	B125 Interior (biased)	2.7	2.7	-6.7	100
62	B125 Interior (biased)	4.7	1.3	2.9	100
63	B125 Interior (biased)	2.7	1.3	-6.7	100
64	B125 Interior (biased)	4.0	2.7	-0.4	100
65	B125 Interior (biased)	2.7	2.0	-6.7	100
66	B125 Interior (biased)	4.0	3.3	-0.4	100
67	B125 Interior (biased)	7.3	4.0	15.4	100
68	B125 Interior (biased)	8.0	6.0	17.9	100
69	B125 Interior (biased)	2.0	6.0	-9.6	100
47 QC	B125 Interior (biased)	4.7	4.7	2.9	100
46 QC	B125 Interior (biased)	4.0	4.0	-0.4	100

46

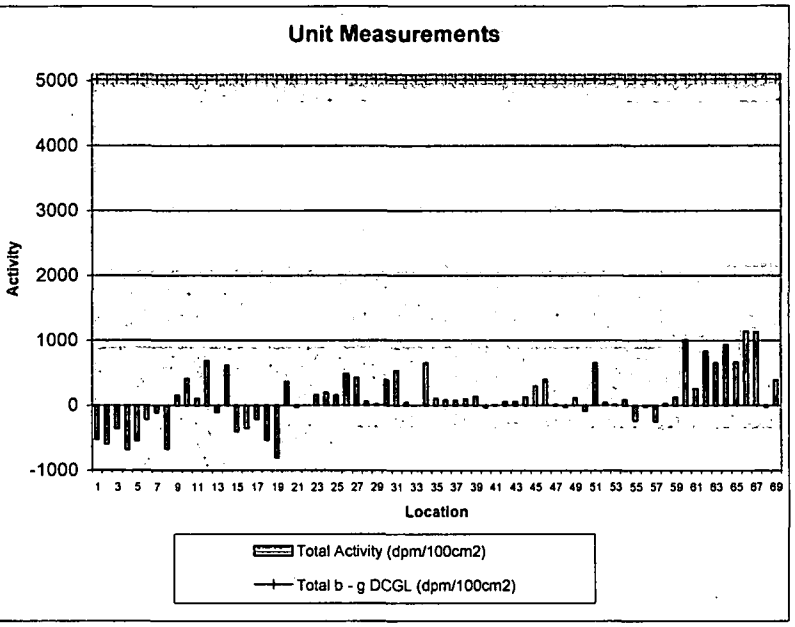
TSA Beta-Gamma

G10004

10/30/01

					1	2	3	4	5 QC	
				Instrument:	1425	394	394	1379	1136	
std. Dev.:	421.1	max:	688.2	Ave. Inst. background:	597.5	597.5	597.5	597.5	600.5	cpm
mean:	-172.1	min:	-804.0	Instrument efficiency:	31.10%	28.50%	28.50%	31.90%	31.70%	
median:	-213.1			Instrument MDA:	261	265	265	243	237	dpm

	Surface Location	Total Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Total β - γ DCGL (dpm/100cm²)
1	B125 Interior (random)	449	445	-520.9	5000
2	B125 Interior (random)	429	427	-591.1	5000
3	B125 Interior (random)	483	641	-358.8	5000
4	B125 Interior (random)	380	407	-681.7	5000
5	B125 Interior (random)	443	449	-542.0	5000
6	B125 Interior (random)	529	659	-214.6	5000
7	B125 Interior (random)	563	623	-108.0	5000
8	B125 Interior (random)	385	471	-666.0	5000
9	B125 Interior (random)	646	609	152.2	5000
10	B125 Interior (random)	725	685	410.1	5000
11	B125 Interior (random)	627	613	103.6	5000
12	B125 Interior (random)	817	577	688.2	5000
13	B125 Interior (random)	565	657	-101.8	5000
14	B125 Interior (random)	772	629	612.4	5000
15	B125 Interior (random)	469	516	-402.7	5000
16	B125 Interior (random)	485	473	-352.6	5000
17	B125 Interior (random)	530	458	-211.5	5000
18	B125 Interior (random)	445	420	-535.0	5000
19	B125 Interior (random)	341	520	-804.0	5000
20	B125 Interior (random)	711	721	365.1	5000
21	B125 Interior (random)	590	618	-26.2	5000
22	B125 Interior (random)	597	586	-1.6	5000
4 QC	B125 Interior (random)	406	539	-613.6	5000
14 QC	B125 Interior (random)	849	662	783.9	5000
23	B125 Interior (biased)	643	591	159.8	5000
24	B125 Interior (biased)	654	614	198.4	5000
25	B125 Interior (biased)	642	617	156.3	5000
26	B125 Interior (biased)	749	675	487.3	5000
27	B125 Interior (biased)	731	700	429.4	5000
28	B125 Interior (biased)	615	607	61.5	5000
29	B125 Interior (biased)	602	597	15.9	5000
30	B125 Interior (biased)	719	683	390.8	5000
31	B125 Interior (biased)	764	680	535.5	5000
32	B125 Interior (biased)	610	603	44.0	5000
33	B125 Interior (biased)	598	625	1.9	5000
34	B125 Interior (biased)	783	612	651.0	5000
35	B125 Interior (biased)	628	590	107.1	5000
36	B125 Interior (biased)	622	625	86.1	5000
37	B125 Interior (biased)	619	582	75.6	5000
38	B125 Interior (biased)	625	619	96.6	5000
39	B125 Interior (biased)	637	576	138.7	5000
40	B125 Interior (biased)	589	631	-29.7	5000
41	B125 Interior (biased)	600	577	8.9	5000
42	B125 Interior (biased)	615	633	61.5	5000
43	B125 Interior (biased)	613	553	54.5	5000
44	B125 Interior (biased)	634	559	128.2	5000
45	B125 Interior (biased)	681	620	293.1	5000
23 QC	B125 Interior (random)	735	679	442.2	5000
26 QC	B125 Interior (random)	669	566	251.0	5000



	Surface Location	Total Alpha Counts (cpm/100cm2)	Local Area Bkgd (cpm/100cm2)	Total Alpha Activity (dpm/100cm2)	Total Alpha DCGL (dpm/100cm2)
46	B125 Interior (biased)	711	630	398.4	5000
47	B125 Interior (biased)	601	569	12.4	5000
48	B125 Interior (biased)	591	535	-22.7	5000
49	B125 Interior (biased)	629	567	110.7	5000
50	B125 Interior (biased)	574	596	-82.3	5000
51	B125 Interior (biased)	784	589	654.5	5000
52	B125 Interior (biased)	609	596	40.5	5000
53	B125 Interior (biased)	601	548	12.4	5000
54	B125 Interior (biased)	623	579	89.6	5000
55	B125 Interior (biased)	530	481	-236.7	5000
56	B125 Interior (biased)	593	535	-14.0	5000
57	B125 Interior (biased)	527	513	-247.2	5000
58	B125 Interior (biased)	606	570	30.0	5000
59	B125 Interior (biased)	639	626	130.2	5000
60	B125 Interior (biased)	920	698	1011.1	5000
61	B125 Interior (biased)	680	637	258.7	5000
62	B125 Interior (biased)	863	683	832.4	5000
63	B125 Interior (biased)	805	675	650.6	5000
64	B125 Interior (biased)	897	729	939.0	5000
65	B125 Interior (biased)	811	793	669.4	5000
66	B125 Interior (biased)	962	741	1142.7	5000
67	B125 Interior (biased)	959	791	1133.3	5000
68	B125 Interior (biased)	590	572	-26.2	5000
69	B125 Interior (biased)	709	599	391.4	5000
47 QC	B125 Interior (biased)	713	667	362.2	5000
46 QC	B125 Interior (biased)	705	658	337.1	5000

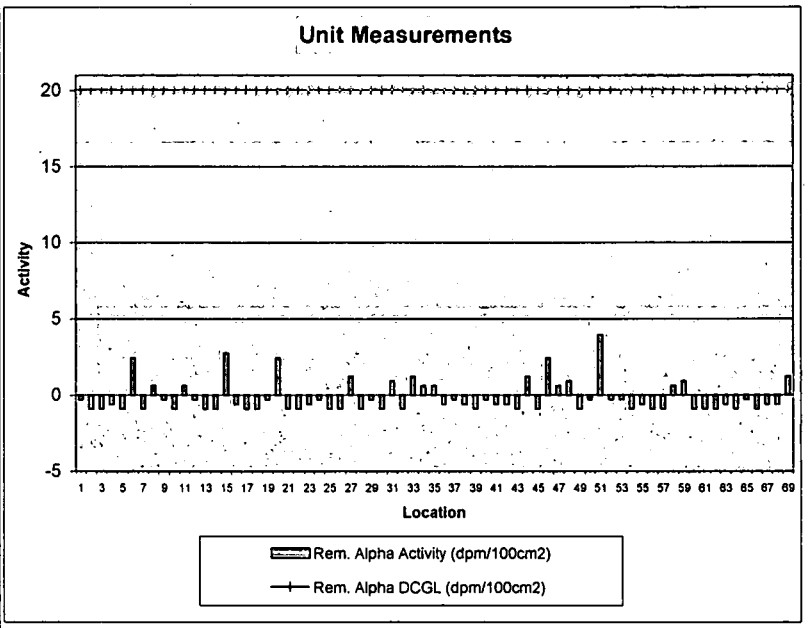
Removable Alpha

G10004

10/24/01

					1	2	3	4	5	6	7	8	
				Instrument:					966	770	767	851	
std. Dev.:	1.2	max:	2.7	Ave. Inst. background:					0.2	0.3	0.1	0.3	cpm
mean:	-0.2	min:	-0.9	Instrument efficiency:			Beta instruments		33.00%	33.00%	33.00%	33.00%	
median:	-0.8			Instrument MDA:					7.1	7.8	6.2	7.8	dpm

	Surface Location	Total Counts (cpm/100cm²)	Inst. Bkgd (cpm/100cm²)	Rem. Alpha Activity (dpm/100cm²)	Rem. Alpha DCGL (dpm/100cm²)
1	B125 Interior (random)	0.0	0.1	-0.3	20
2	B125 Interior (random)	0.0	0.3	-0.9	20
3	B125 Interior (random)	0.0	0.3	-0.9	20
4	B125 Interior (random)	0.0	0.2	-0.6	20
5	B125 Interior (random)	0.0	0.3	-0.9	20
6	B125 Interior (random)	1.0	0.2	2.4	20
7	B125 Interior (random)	0.0	0.3	-0.9	20
8	B125 Interior (random)	0.5	0.3	0.6	20
9	B125 Interior (random)	0.0	0.1	-0.3	20
10	B125 Interior (random)	0.0	0.3	-0.9	20
11	B125 Interior (random)	0.5	0.3	0.6	20
12	B125 Interior (random)	0.0	0.1	-0.3	20
13	B125 Interior (random)	0.0	0.3	-0.9	20
14	B125 Interior (random)	0.0	0.3	-0.9	20
15	B125 Interior (random)	1.0	0.1	2.7	20
16	B125 Interior (random)	0.0	0.2	-0.6	20
17	B125 Interior (random)	0.0	0.3	-0.9	20
18	B125 Interior (random)	0.0	0.3	-0.9	20
19	B125 Interior (random)	0.0	0.1	-0.3	20
20	B125 Interior (random)	1.0	0.2	2.4	20
21	B125 Interior (random)	0.0	0.3	-0.9	20
22	B125 Interior (random)	0.0	0.3	-0.9	20
23	B125 Interior (biased)	0.0	0.2	-0.6	20
24	B125 Interior (biased)	0.0	0.1	-0.3	20
25	B125 Interior (biased)	0.0	0.3	-0.9	20
26	B125 Interior (biased)	0.0	0.3	-0.9	20
27	B125 Interior (biased)	0.5	0.1	1.2	20
28	B125 Interior (biased)	0.0	0.3	-0.9	20
29	B125 Interior (biased)	0.0	0.1	-0.3	20
30	B125 Interior (biased)	0.0	0.3	-0.9	20
31	B125 Interior (biased)	0.5	0.2	0.9	20
32	B125 Interior (biased)	0.0	0.3	-0.9	20
33	B125 Interior (biased)	0.5	0.1	1.2	20
34	B125 Interior (biased)	0.5	0.3	0.6	20
35	B125 Interior (biased)	0.5	0.3	0.6	20
36	B125 Interior (biased)	0.0	0.2	-0.6	20
37	B125 Interior (biased)	0.0	0.1	-0.3	20
38	B125 Interior (biased)	0.0	0.2	-0.6	20
39	B125 Interior (biased)	0.0	0.3	-0.9	20
40	B125 Interior (biased)	0.0	0.1	-0.3	20
41	B125 Interior (biased)	0.0	0.2	-0.6	20
42	B125 Interior (biased)	0.0	0.2	-0.6	20
43	B125 Interior (biased)	0.0	0.3	-0.9	20
44	B125 Interior (biased)	0.5	0.1	1.2	20
45	B125 Interior (biased)	0.0	0.3	-0.9	20
46	B125 Interior (biased)	1.0	0.2	2.4	20



	Surface Location	Total Alpha Counts (cpm/100cm2)	Local Area Bkgd (cpm/100cm2)	Total Alpha Activity (dpm/100cm2)	Total Alpha DCGL (dpm/100cm2)
47	B125 Interior (biased)	0.5	0.3	0.6	20
48	B125 Interior (biased)	0.5	0.2	0.9	20
49	B125 Interior (biased)	0.0	0.3	-0.9	20
50	B125 Interior (biased)	0.0	0.1	-0.3	20
51	B125 Interior (biased)	1.5	0.2	3.9	20
52	B125 Interior (biased)	0.0	0.1	-0.3	20
53	B125 Interior (biased)	0.0	0.1	-0.3	20
54	B125 Interior (biased)	0.0	0.3	-0.9	20
55	B125 Interior (biased)	0.0	0.2	-0.6	20
56	B125 Interior (biased)	0.0	0.3	-0.9	20
57	B125 Interior (biased)	0.0	0.3	-0.9	20
58	B125 Interior (biased)	0.5	0.3	0.6	20
59	B125 Interior (biased)	0.5	0.2	0.9	20
60	B125 Interior (biased)	0.0	0.3	-0.9	20
61	B125 Interior (biased)	0.0	0.3	-0.9	20
62	B125 Interior (biased)	0.0	0.3	-0.9	20
63	B125 Interior (biased)	0.0	0.2	-0.6	20
64	B125 Interior (biased)	0.0	0.3	-0.9	20
65	B125 Interior (biased)	0.0	0.1	-0.3	20
66	B125 Interior (biased)	0.0	0.3	-0.9	20
67	B125 Interior (biased)	0.0	0.2	-0.6	20
68	B125 Interior (biased)	0.0	0.2	-0.6	20
69	B125 Interior (biased)	0.5	0.1	1.2	20

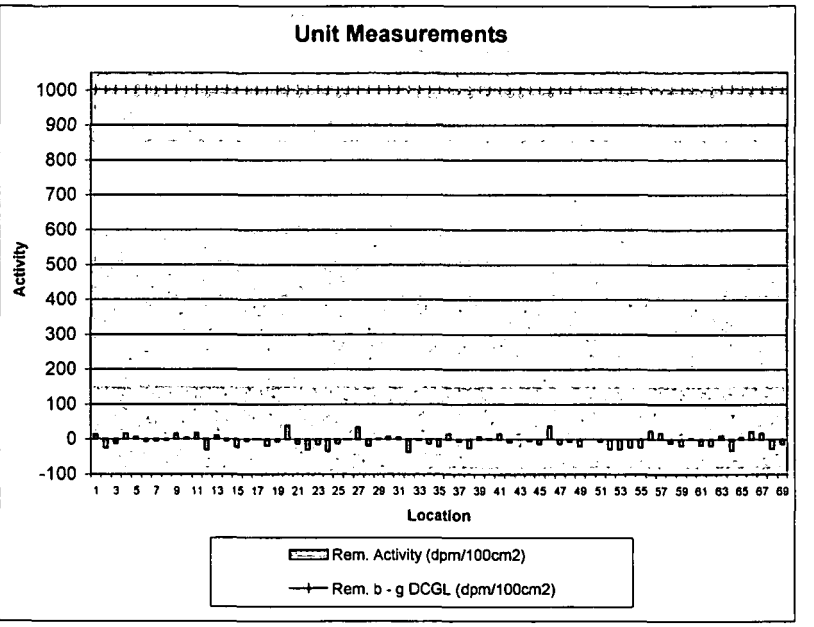
Removable Beta-Gamma

G10004

10/24/01

					1	2	3	4	5	6	7	8	
				Instrument:	835	911	905	700					
std. Dev.:	17.3	max:	40.0	Inst. background:	36.0	36.0	41.0	35.0		Alpha Instruments			cpm
mean:	-2.3	min:	-30.0	Instrument efficiency:	25.00%	25.00%	25.00%	25.00%					
median:	-4.0			Instrument MDA:	42.4	42.4	44.9	41.9					dpm

	Surface Location	Total Counts (cpm/100cm²)	Inst. Bkgd (cpm/100cm²)	Rem. Activity (dpm/100cm²)	Rem. b - g DCGL (dpm/100cm²)
1	B125 Interior (random)	38.5	35.0	14.0	1000
2	B125 Interior (random)	29.0	35.0	-24.0	1000
3	B125 Interior (random)	38.0	41.0	-12.0	1000
4	B125 Interior (random)	40.0	36.0	16.0	1000
5	B125 Interior (random)	36.5	35.0	6.0	1000
6	B125 Interior (random)	34.5	36.0	-6.0	1000
7	B125 Interior (random)	35.0	36.0	-4.0	1000
8	B125 Interior (random)	34.5	35.0	-2.0	1000
9	B125 Interior (random)	45.0	41.0	16.0	1000
10	B125 Interior (random)	37.0	36.0	4.0	1000
11	B125 Interior (random)	40.5	36.0	18.0	1000
12	B125 Interior (random)	33.5	41.0	-30.0	1000
13	B125 Interior (random)	37.5	35.0	10.0	1000
14	B125 Interior (random)	35.0	36.0	-4.0	1000
15	B125 Interior (random)	35.5	41.0	-22.0	1000
16	B125 Interior (random)	35.0	36.0	-4.0	1000
17	B125 Interior (random)	36.0	36.0	0.0	1000
18	B125 Interior (random)	31.5	36.0	-18.0	1000
19	B125 Interior (random)	39.5	41.0	-6.0	1000
20	B125 Interior (random)	46.0	36.0	40.0	1000
21	B125 Interior (random)	32.0	35.0	-12.0	1000
22	B125 Interior (random)	28.5	36.0	-30.0	1000
23	B125 Interior (biased)	32.5	36.0	-14.0	1000
24	B125 Interior (biased)	32.5	41.0	-34.0	1000
25	B125 Interior (biased)	33.0	36.0	-12.0	1000
26	B125 Interior (biased)	35.0	35.0	0.0	1000
27	B125 Interior (biased)	49.5	41.0	34.0	1000
28	B125 Interior (biased)	30.5	35.0	-18.0	1000
29	B125 Interior (biased)	41.5	41.0	2.0	1000
30	B125 Interior (biased)	38.0	36.0	8.0	1000
31	B125 Interior (biased)	37.5	36.0	6.0	1000
32	B125 Interior (biased)	27.0	36.0	-36.0	1000
33	B125 Interior (biased)	40.5	41.0	-2.0	1000
34	B125 Interior (biased)	32.0	35.0	-12.0	1000
35	B125 Interior (biased)	31.0	36.0	-20.0	1000
36	B125 Interior (biased)	40.0	36.0	16.0	1000
37	B125 Interior (biased)	39.5	41.0	-6.0	1000
38	B125 Interior (biased)	30.0	36.0	-24.0	1000
39	B125 Interior (biased)	37.0	35.0	8.0	1000
40	B125 Interior (biased)	41.5	41.0	2.0	1000
41	B125 Interior (biased)	40.0	36.0	16.0	1000
42	B125 Interior (biased)	34.0	36.0	-8.0	1000
43	B125 Interior (biased)	36.0	36.0	0.0	1000
44	B125 Interior (biased)	40.0	41.0	-4.0	1000
45	B125 Interior (biased)	32.0	35.0	-12.0	1000
46	B125 Interior (biased)	45.5	36.0	38.0	1000



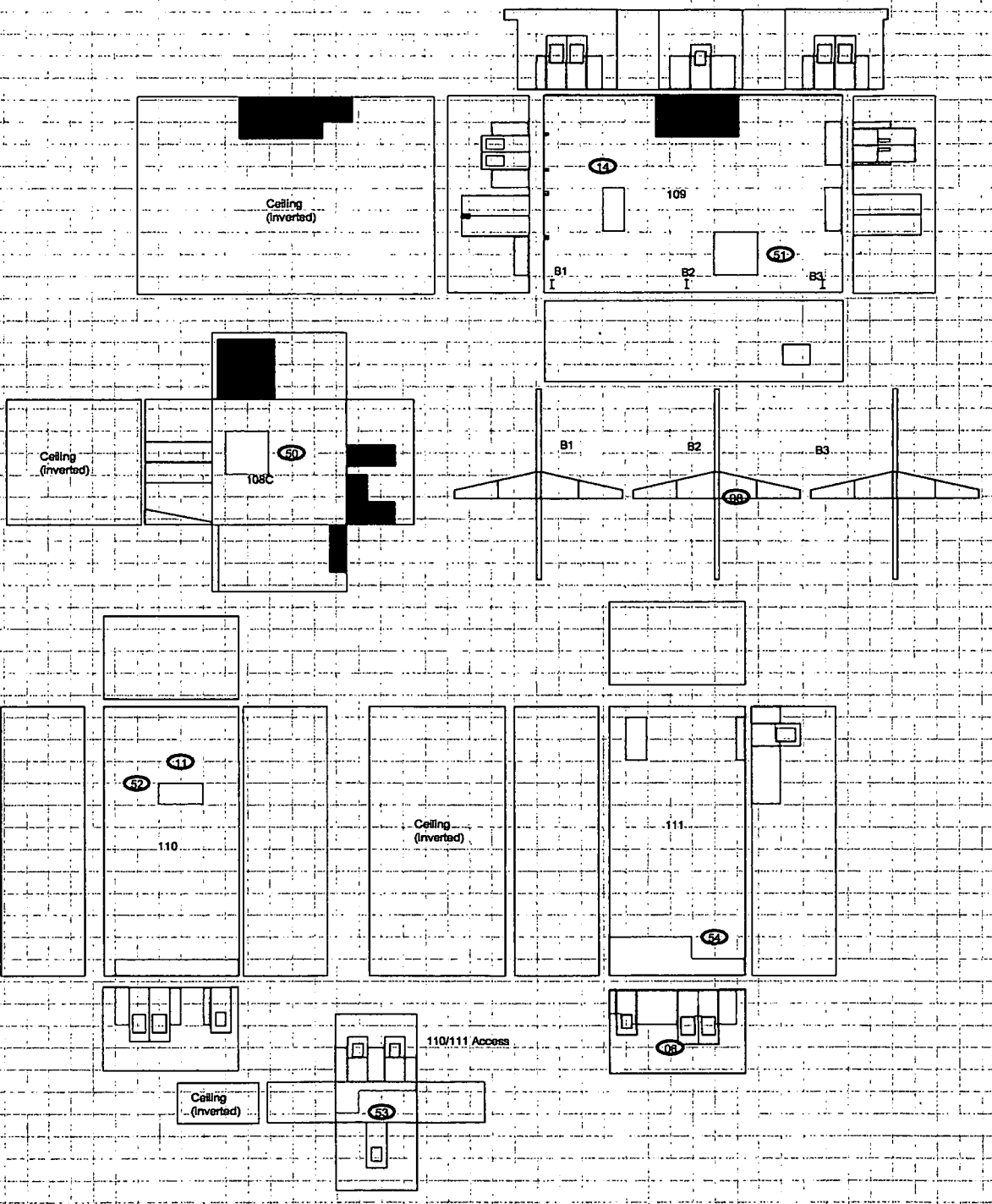
	Surface Location	Total Alpha Counts (cpm/100cm2)	Local Area Bkgd (cpm/100cm2)	Total Alpha Activity (dpm/100cm2)	Total Alpha DCGL (dpm/100cm2)
47	B125 Interior (biased)	32.0	35.0	-12.0	1000
48	B125 Interior (biased)	34.5	36.0	-6.0	1000
49	B125 Interior (biased)	31.0	36.0	-20.0	1000
50	B125 Interior (biased)	41.0	41.0	0.0	1000
51	B125 Interior (biased)	34.5	36.0	-6.0	1000
52	B125 Interior (biased)	34.0	41.0	-28.0	1000
53	B125 Interior (biased)	34.0	41.0	-28.0	1000
54	B125 Interior (biased)	29.5	35.0	-22.0	1000
55	B125 Interior (biased)	30.5	36.0	-22.0	1000
56	B125 Interior (biased)	41.0	35.0	24.0	1000
57	B125 Interior (biased)	40.5	36.0	18.0	1000
58	B125 Interior (biased)	32.5	35.0	-10.0	1000
59	B125 Interior (biased)	31.5	36.0	-18.0	1000
60	B125 Interior (biased)	36.5	36.0	2.0	1000
61	B125 Interior (biased)	31.0	35.0	-16.0	1000
62	B125 Interior (biased)	30.5	35.0	-18.0	1000
63	B125 Interior (biased)	38.5	36.0	10.0	1000
64	B125 Interior (biased)	28.0	36.0	-32.0	1000
65	B125 Interior (biased)	42.5	41.0	6.0	1000
66	B125 Interior (biased)	40.5	35.0	22.0	1000
67	B125 Interior (biased)	40.5	36.0	18.0	1000
68	B125 Interior (biased)	29.5	36.0	-26.0	1000
69	B125 Interior (biased)	38.0	41.0	-12.0	1000

RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Rooms 108C, 109, 110, 111

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 1 OF 12



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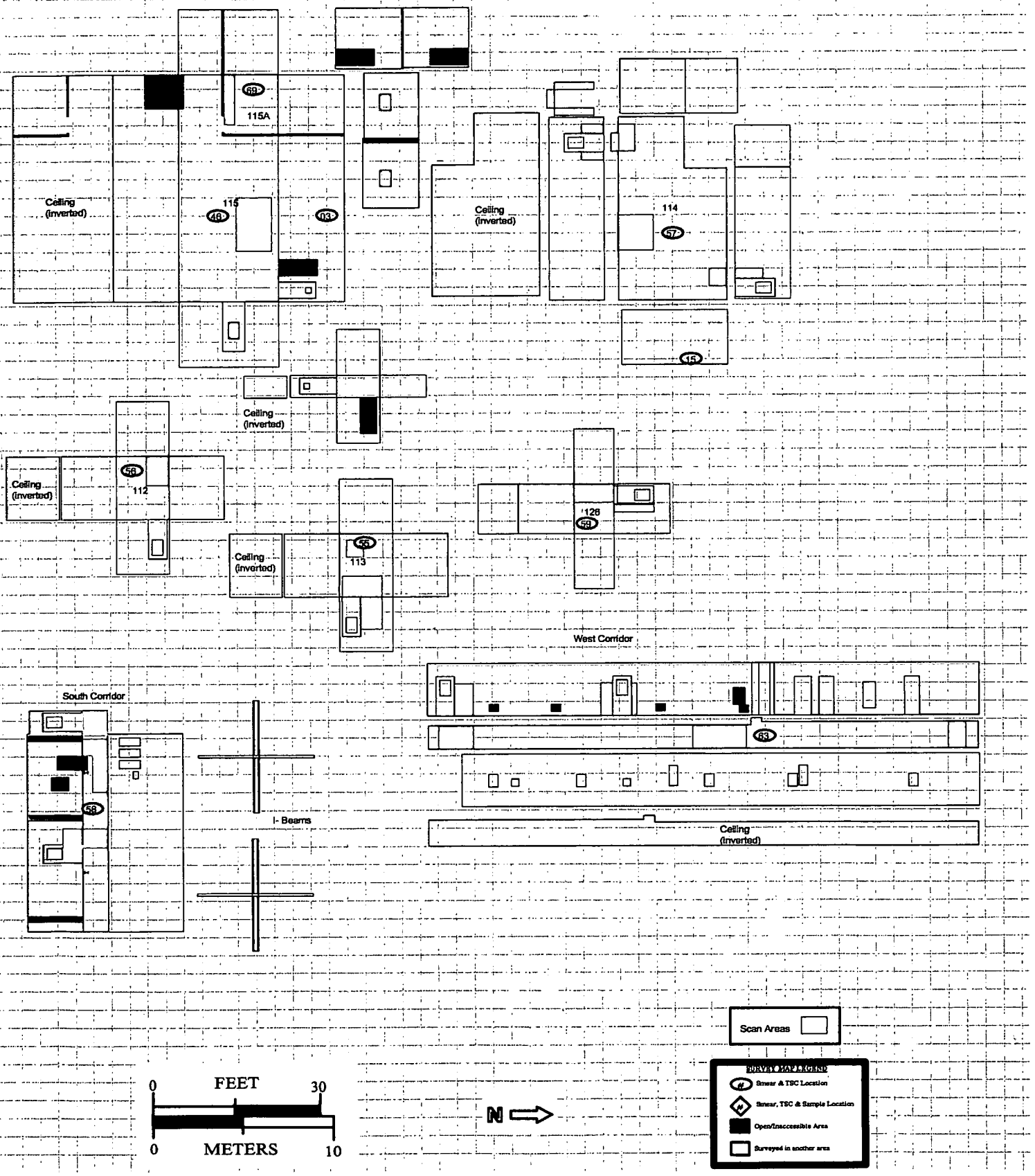
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Rooms 112, 113, 114, 114A, 115, 115A, 126, West Corridor, South Corridor

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 2 OF 12



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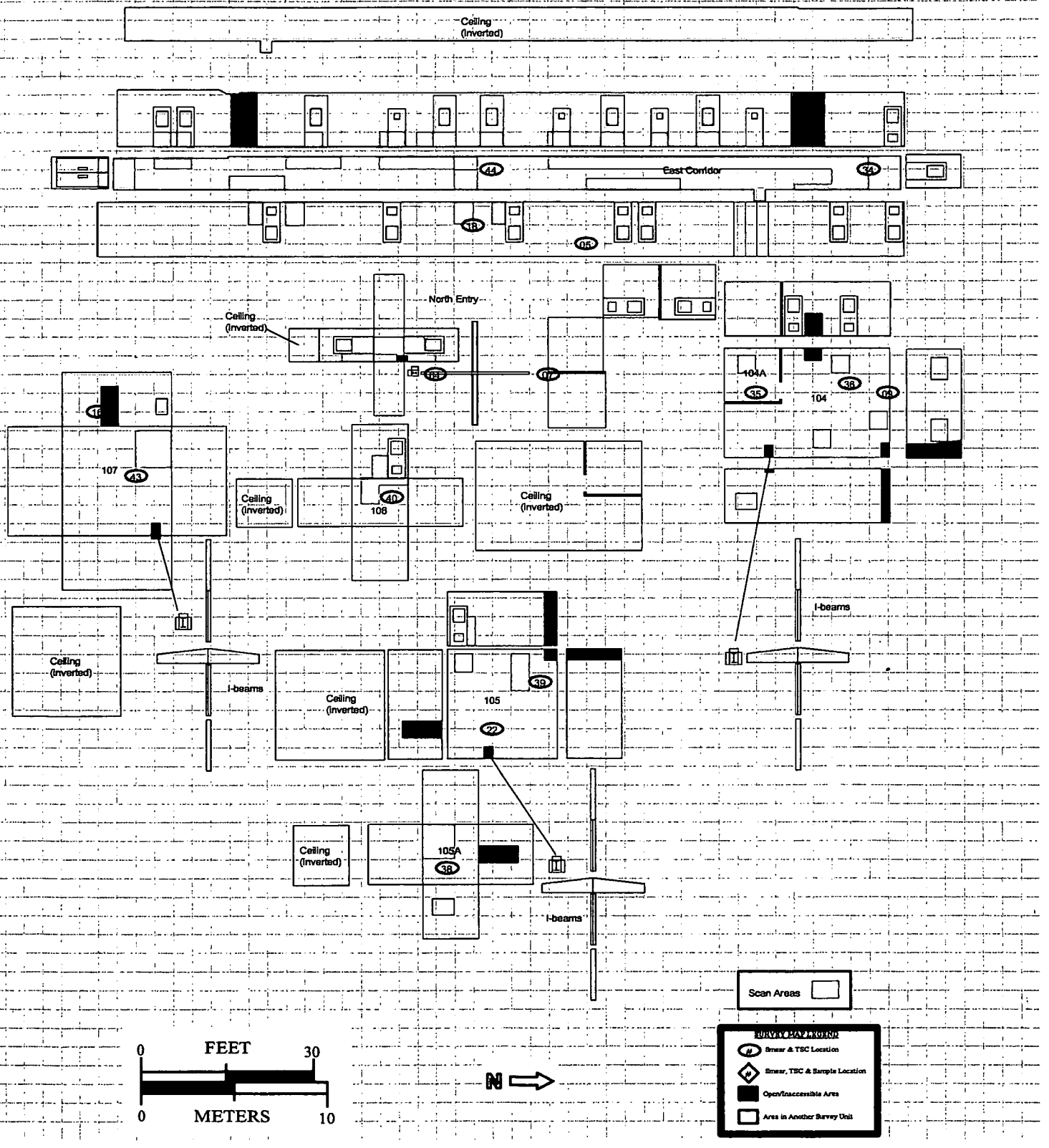
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: East Corridor, North Entry,

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 3 OF 12



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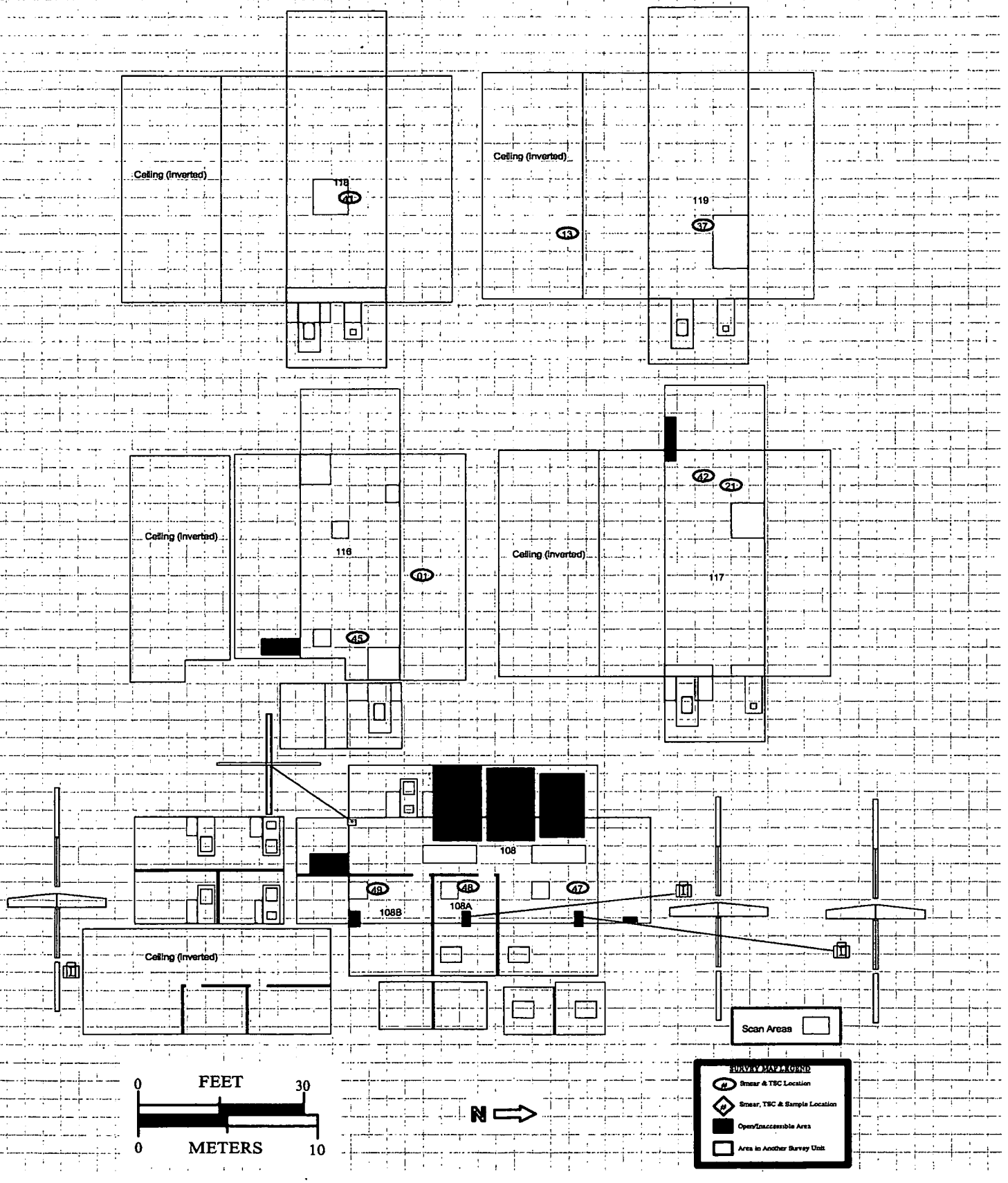
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Rooms 108, 116, 117, 118, 119

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 4 OF 12



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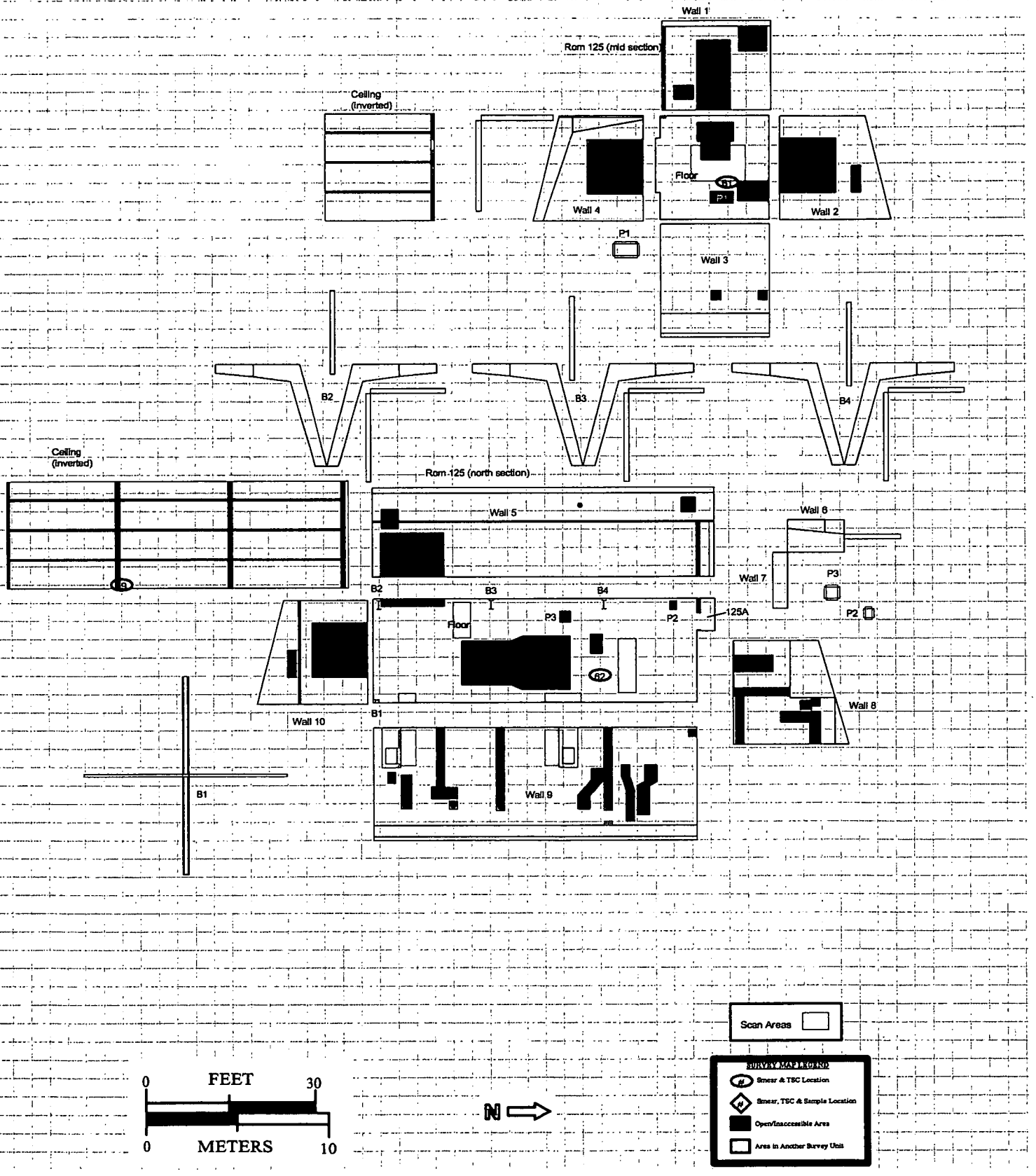
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Room 125 (middle and north end)

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 5 OF 12



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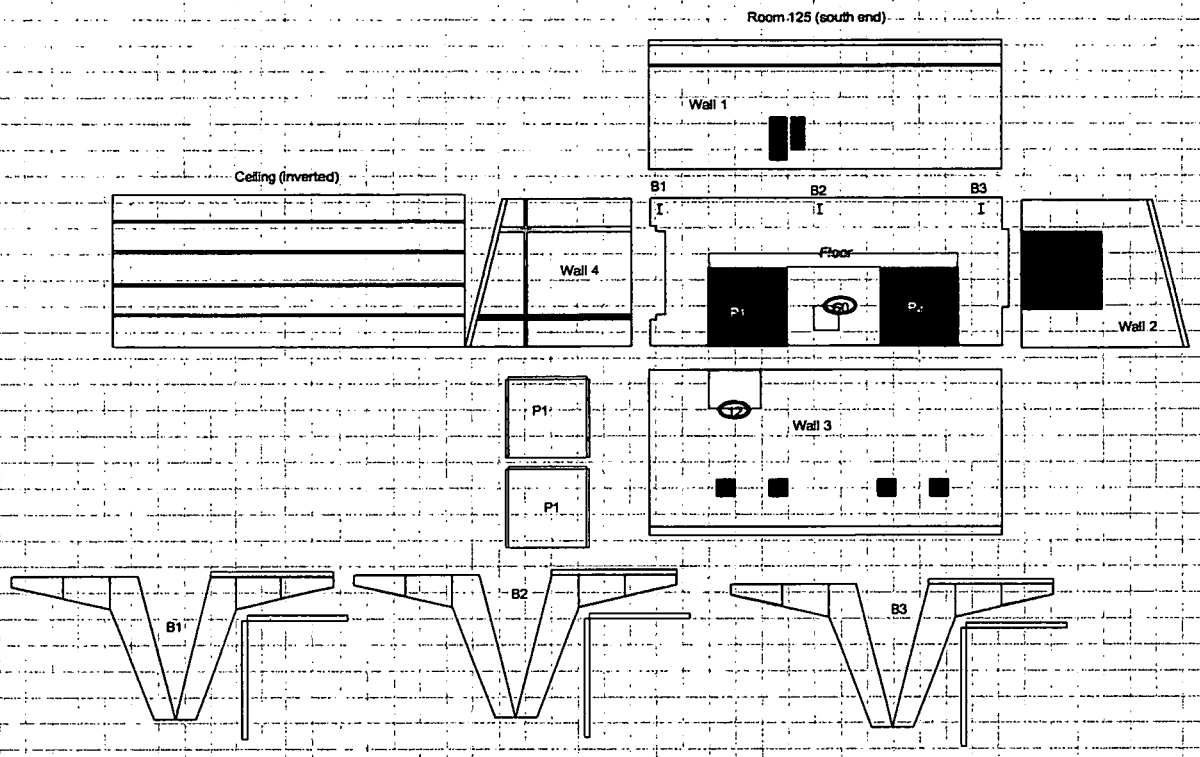
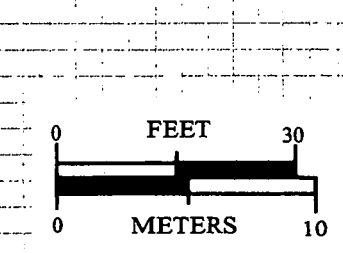
RADIOLOGICAL CLOSEOUT SURVEY FOR

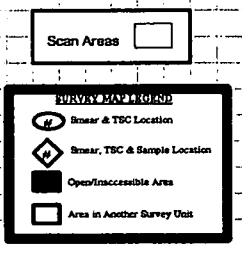
Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Room 125 (south end)

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 6 OF 12







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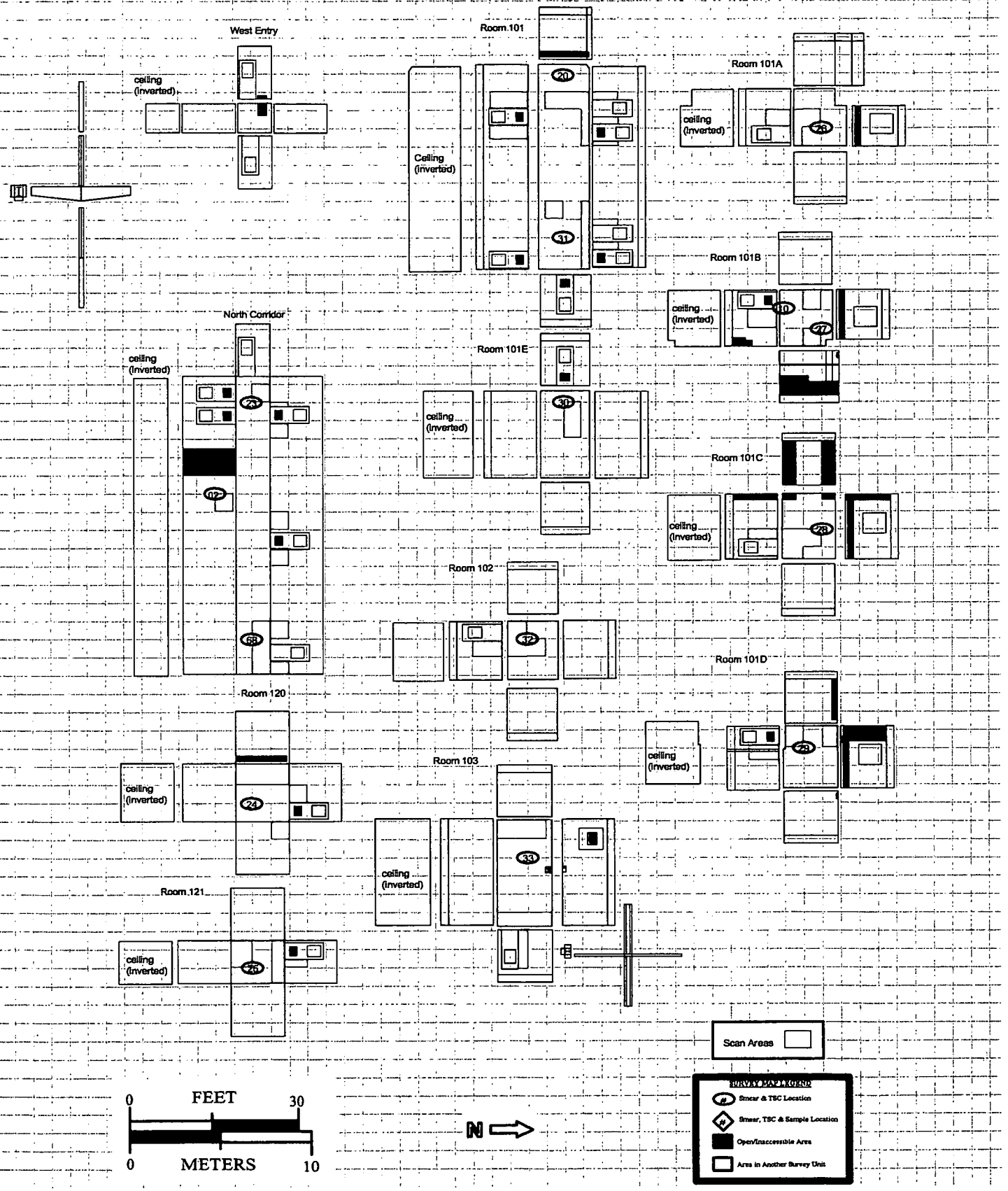
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Rooms 101 to 103, North Corridor, 120, 121

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 7 OF 12



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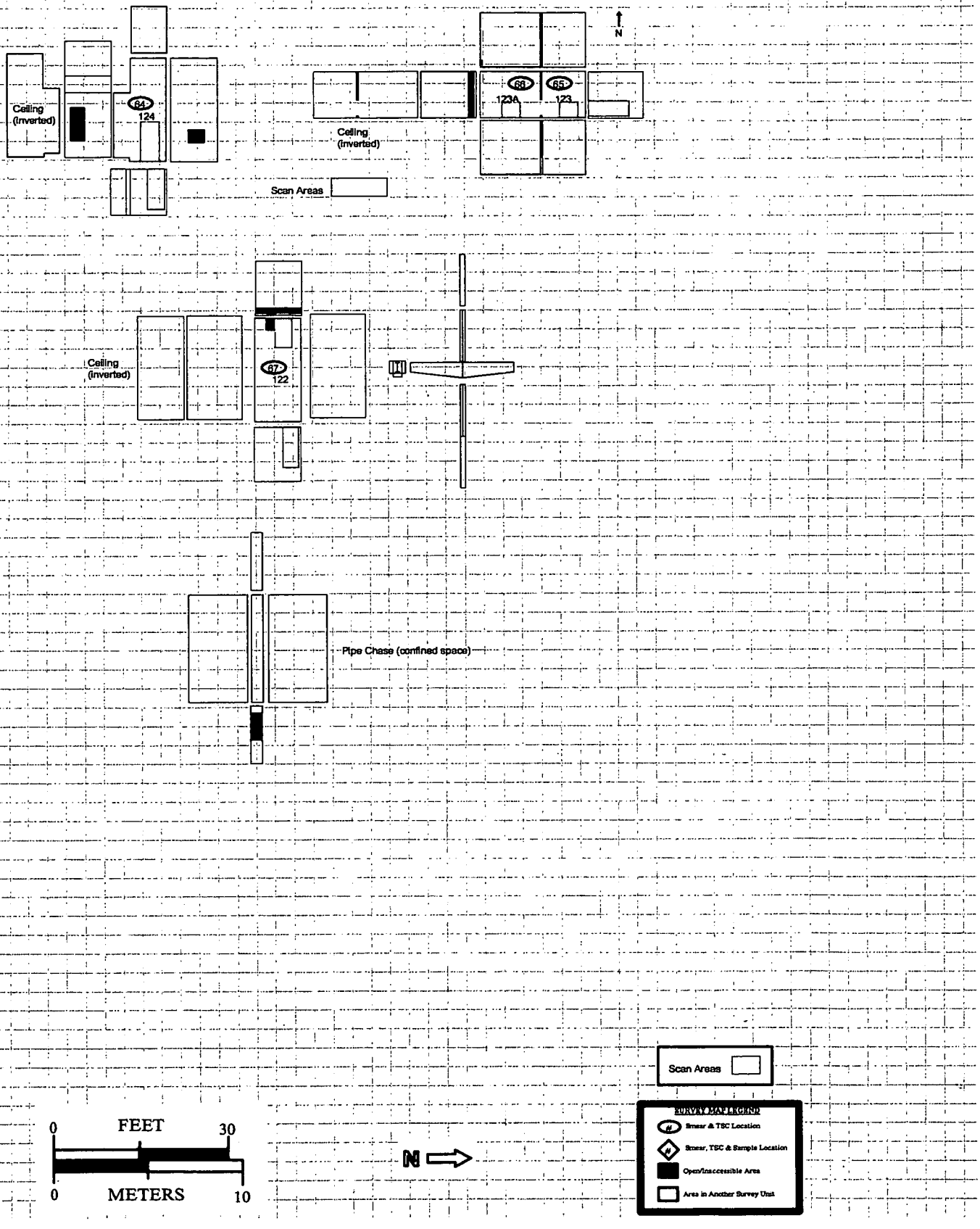
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Rooms 122, 123, 124

Total Floor Area: 1423 **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 8 OF 12

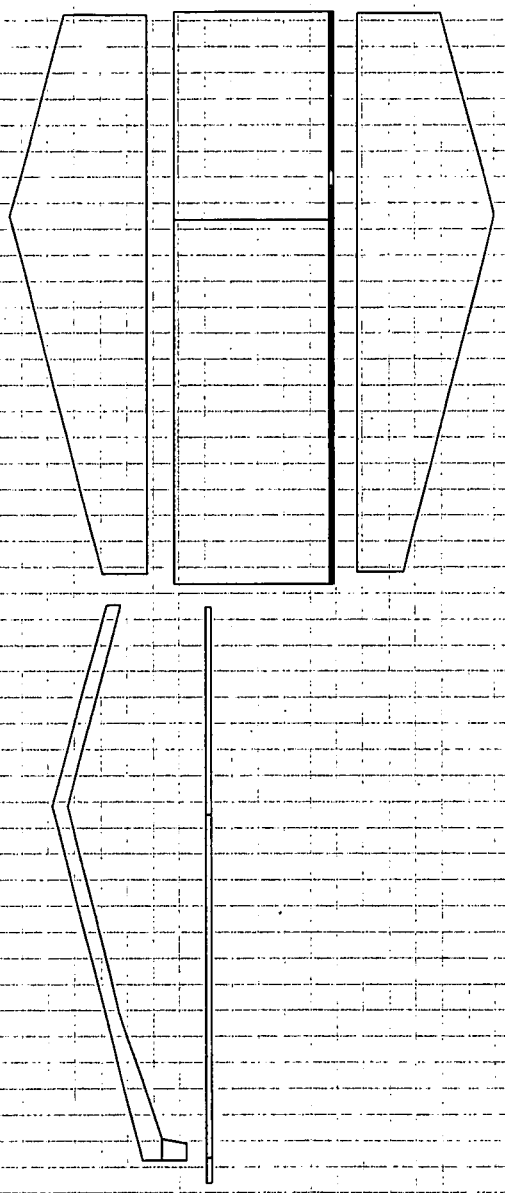


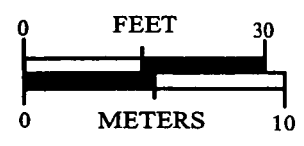
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Ceiling (mid section)

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 9 OF 12





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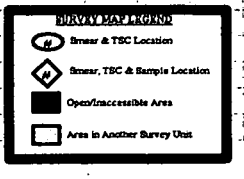


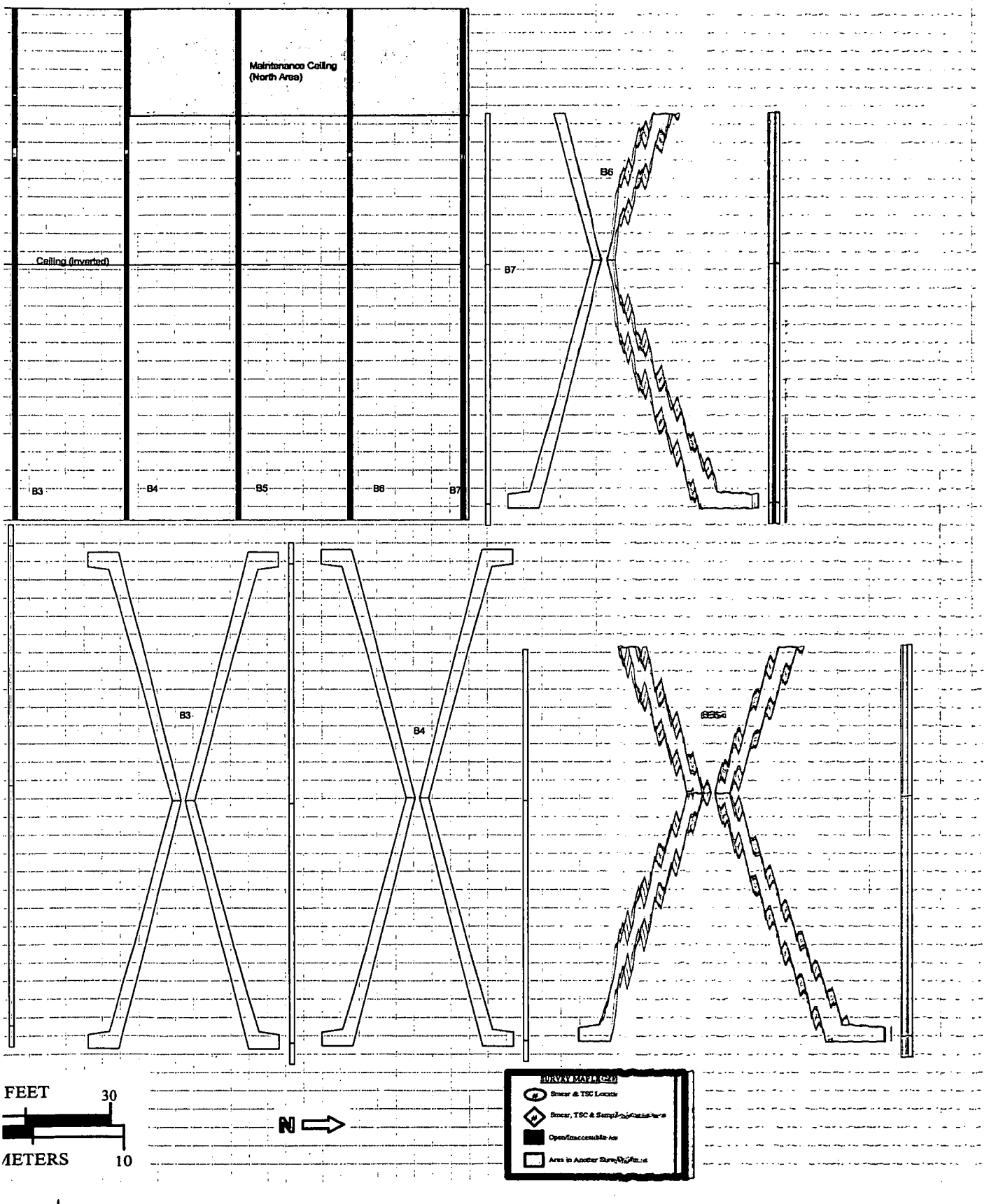
RADIOLOGICAL CLOSEOUT SURVEY FOR

ea: A
125 Survey Unit: G10004 Classification: 3

it Description: Interior Ceiling (north section)

r Area: 1423 sq. m. Total Area: 10104 sq. m Grid Size: N/A

SURVEY UNIT - MAP 10 OF 12



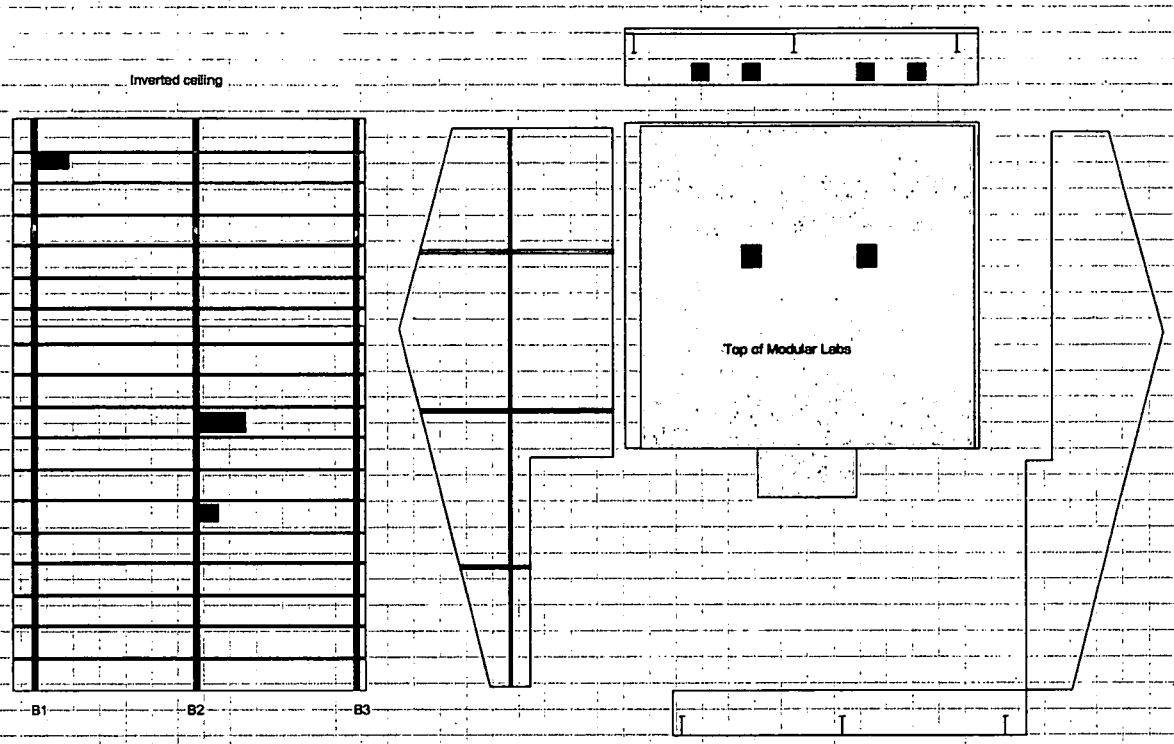
Col

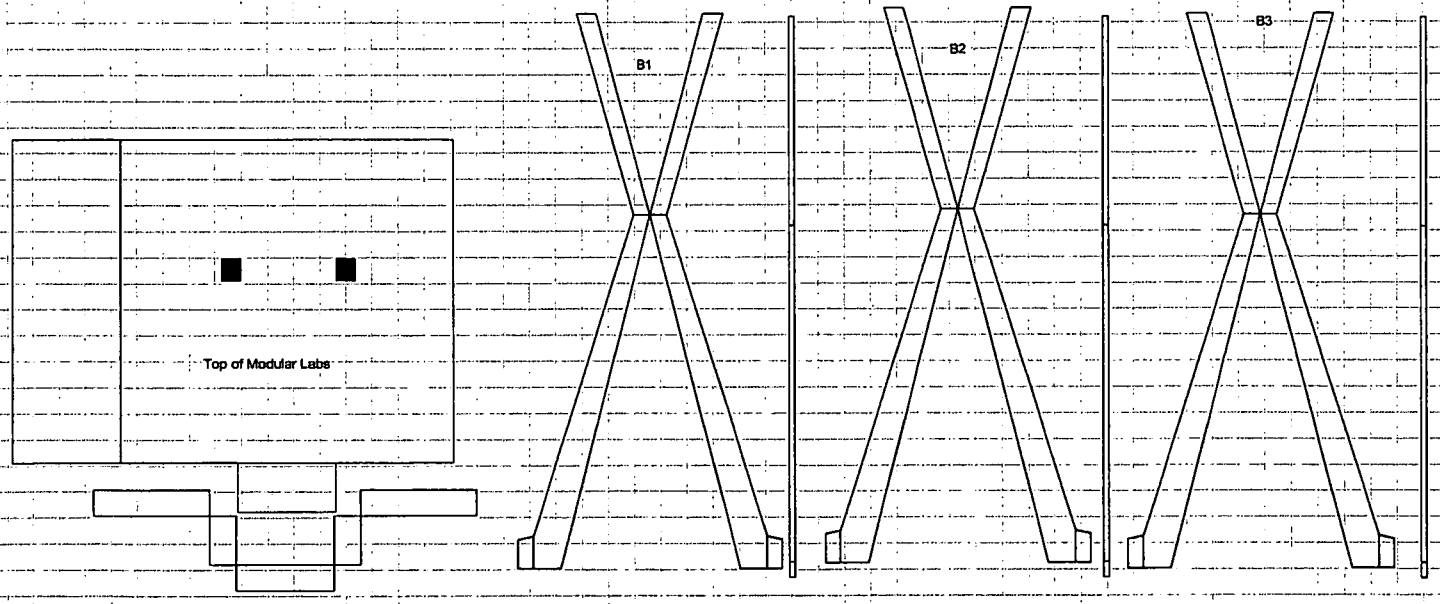
RADIOLOGICAL CLOSEOUT SURVEY FOR

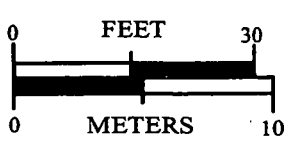
Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Ceiling (south section)

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 11 OF 12







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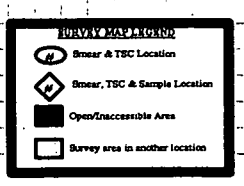

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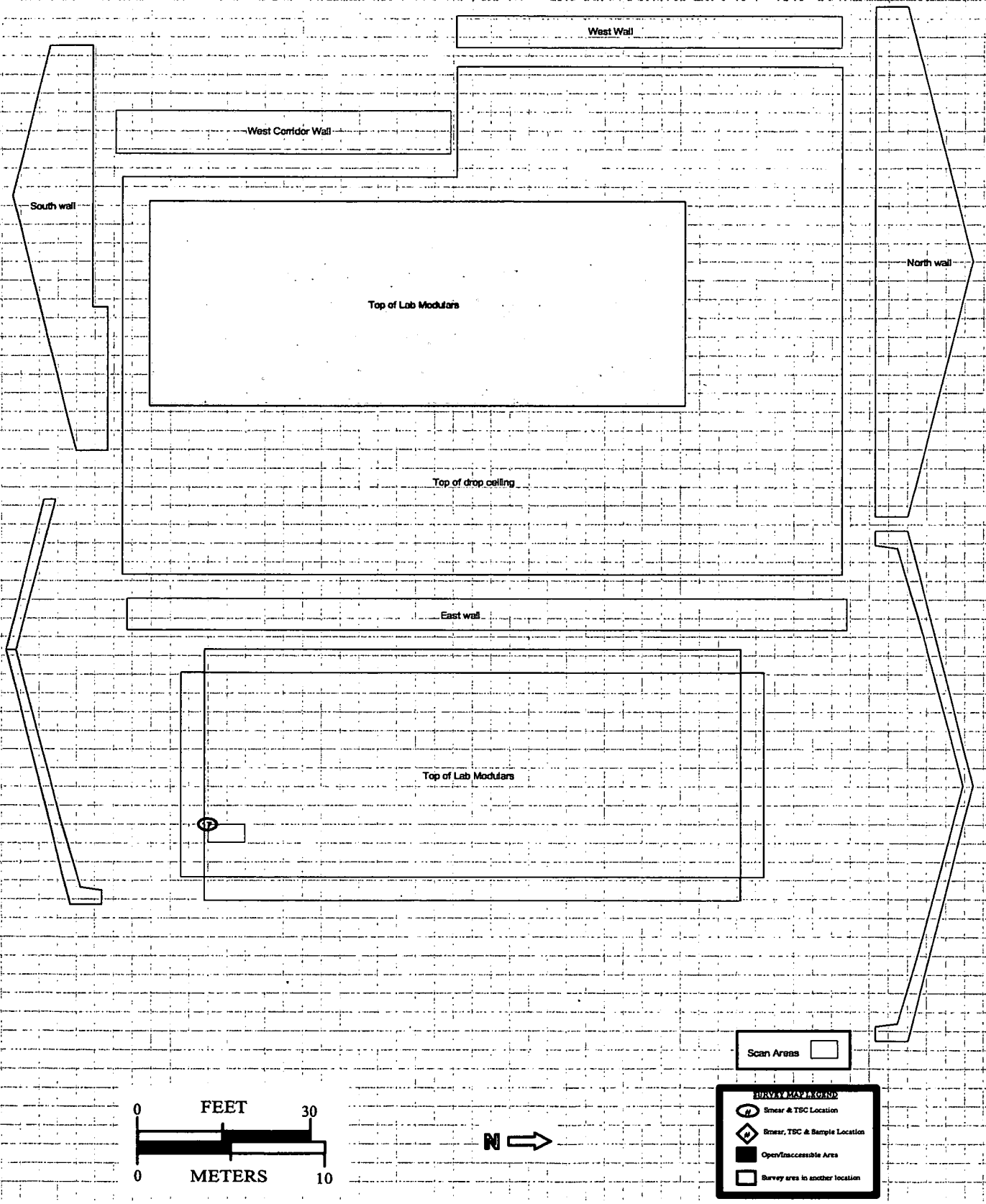
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10004** **Classification: 3**
Building: 125
Survey Unit Description: Interior Upper Walls (north section)

Total Floor Area: 1423 sq. m. **Total Area: 10104 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 12 OF 12



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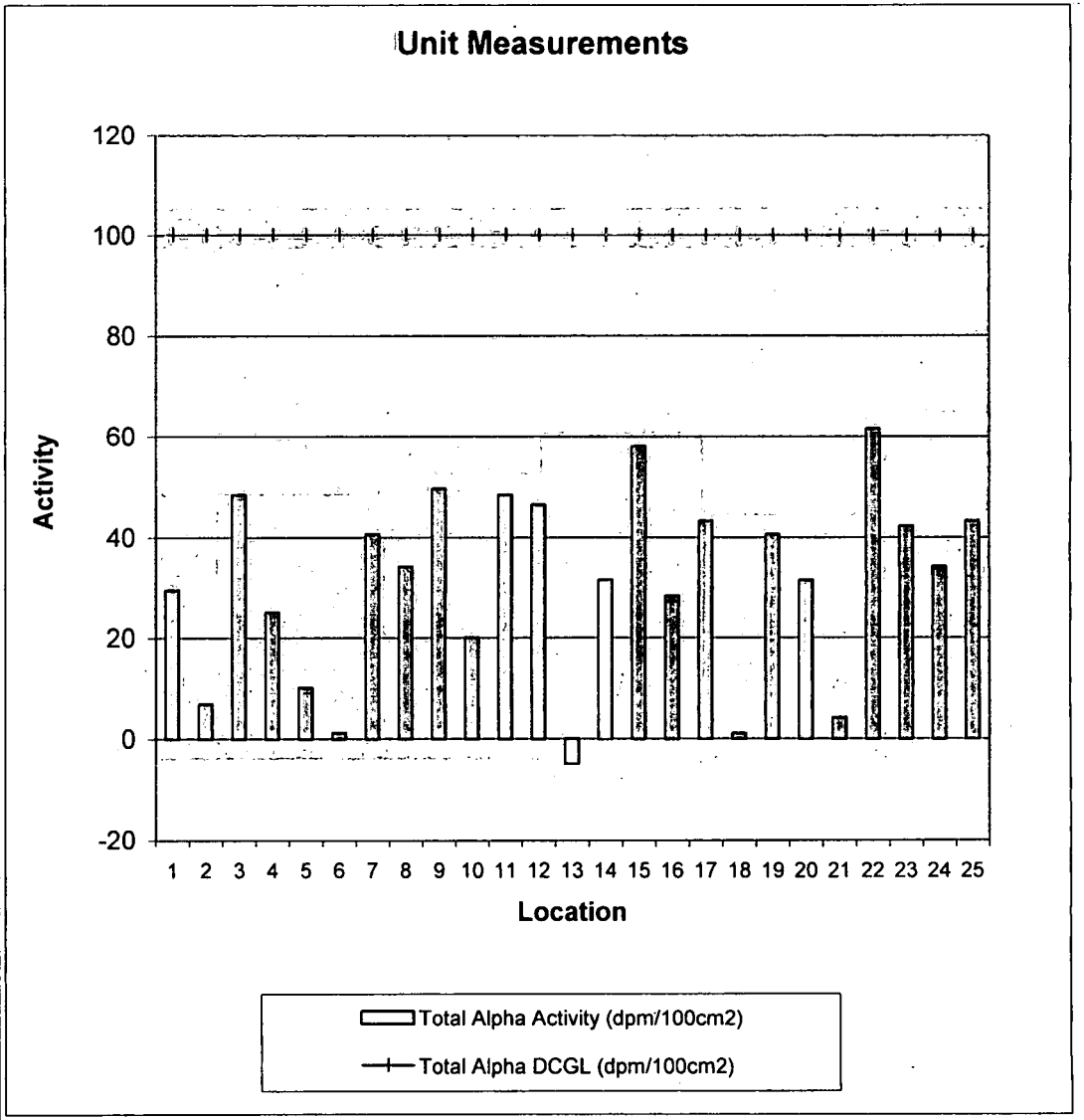
TSA Alpha

G10005

					1	2	3	
				Instrument:	1136	3114	394	QC
std. Dev.:	19.0	max:	61.5	Ave. Inst. background:	3.8	3.8	5.0	cpm
mean:	30.5	min:	-4.9	Instrument efficiency:	21.1%	22.0%	21.8%	
median:	32.9			Instrument MDA:	48	48	48	dpm

	Surface Location	Total Alpha Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Alpha Activity (dpm/100cm²)	Total Alpha DCGL (dpm/100cm²)
1	Bldg 125 Exterior	10.0	6.7	29.5	100
2	Bldg 125 Exterior	5.3	2.3	7.0	100
3	Bldg 125 Exterior	14.0	2.7	48.5	100
4	Bldg 125 Exterior	9.3	3.3	25.1	100
5	Bldg 125 Exterior	6.0	2.7	10.1	100
6	Bldg 125 Exterior	4.0	5.3	1.1	100
7	Bldg 125 Exterior	12.7	2.7	40.6	100
8	Bldg 125 Exterior	11.3	2.7	34.2	100
9	Bldg 125 Exterior	14.7	3.3	49.7	100
10	Bldg 125 Exterior	8.0	3.3	20.1	100
11	Bldg 125 Exterior	14.0	4.7	48.5	100
12	Bldg 125 Exterior	14.0	2.7	46.5	100
13	Bldg 125 Exterior	2.7	2.7	-4.9	100
14	Bldg 125 Exterior	10.7	3.3	31.5	100
15	Bldg 125 Exterior	16.0	3.3	58.0	100
16	Bldg 125 Exterior	10.0	4.0	28.3	100
17	Bldg 125 Exterior	13.3	6.0	43.3	100
18	Bldg 125 Exterior	4.0	5.3	1.1	100
19	Bldg 125 Exterior	12.7	3.3	40.6	100
20	Bldg 125 Exterior	10.7	5.3	31.5	100
21	Bldg 125 Exterior	4.7	3.3	4.2	100
22	Bldg 125 Exterior	17.3	1.3	61.5	100
23	Bldg 125 Exterior	12.7	4.7	42.3	100
24	Bldg 125 Exterior	11.3	3.3	34.2	100
25	Bldg 125 Exterior	13.3	6.0	43.3	100
13 QC	Bldg 125 Exterior	6.7	2.7	7.8	100
12 QC	Bldg 125 Exterior	8.0	7.3	13.8	100



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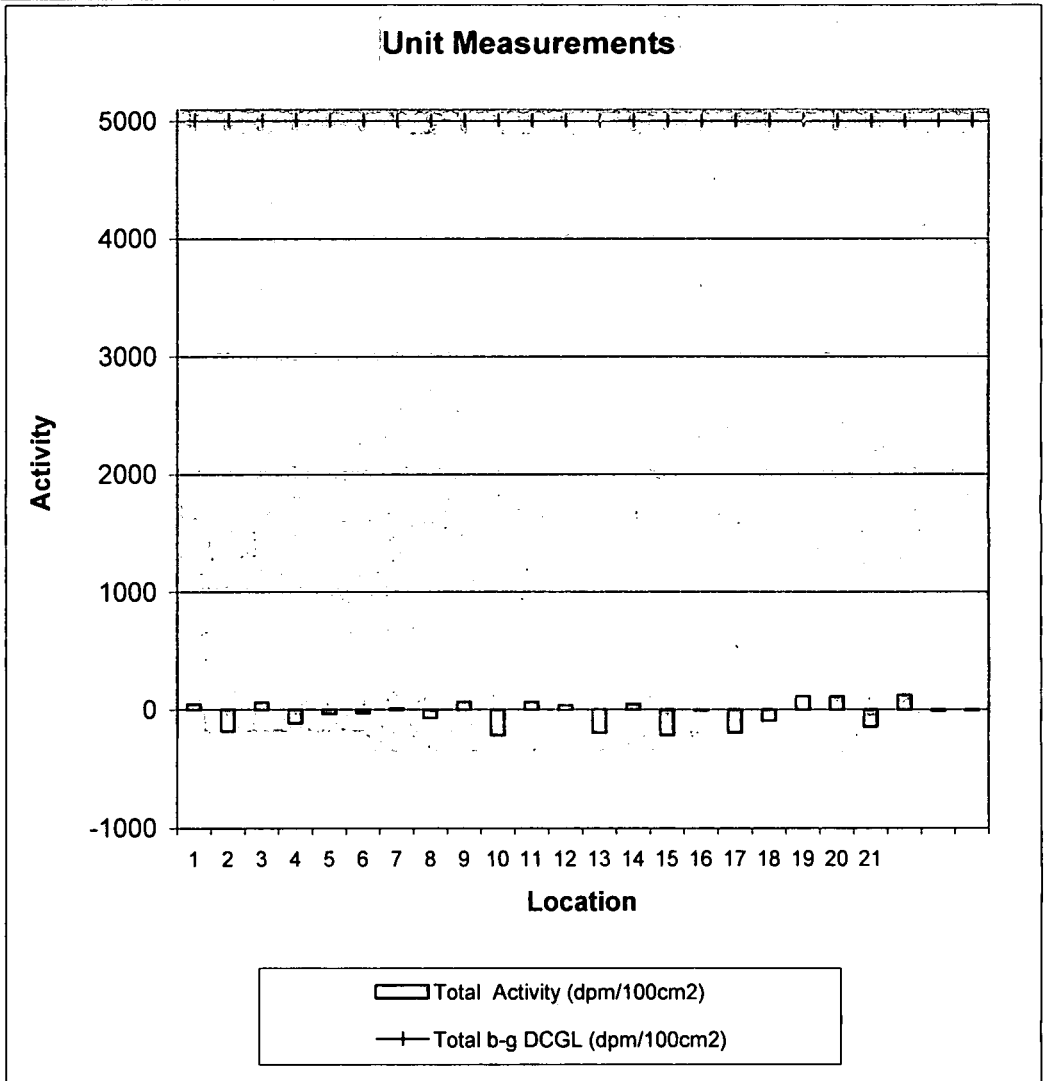
TSA Beta-Gamma

G10005

10/17/01

					1	2	3	
				Instrument:	1136	3114	394	QC
std. Dev.:	109.8	max:	127.5	Ave. Inst. background:	443.7	443.7	450.0	cpm
mean:	-36.7	min:	-210.3	Instrument efficiency:	31.70%	32.40%	28.50%	
median:	-8.5			Instrument MDA:	48	48	48	dpm

	Surface Location	Total Counts (cpm/100cm²)	Local Area Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Total β–γ DCGL (dpm/100cm²)
1	Bldg 125 Exterior	459	475	48.3	5000
2	Bldg 125 Exterior	387	415	-174.9	5000
3	Bldg 125 Exterior	464	457	64.1	5000
4	Bldg 125 Exterior	408	420	-110.1	5000
5	Bldg 125 Exterior	433	559	-33.0	5000
6	Bldg 125 Exterior	435	437	-27.4	5000
7	Bldg 125 Exterior	448	458	13.3	5000
8	Bldg 125 Exterior	421	395	-70.0	5000
9	Bldg 125 Exterior	466	460	68.9	5000
10	Bldg 125 Exterior	377	386	-210.3	5000
11	Bldg 125 Exterior	465	463	67.3	5000
12	Bldg 125 Exterior	456	431	38.0	5000
13	Bldg 125 Exterior	381	490	-193.5	5000
14	Bldg 125 Exterior	460	419	50.4	5000
15	Bldg 125 Exterior	377	386	-210.3	5000
16	Bldg 125 Exterior	441	385	-8.3	5000
17	Bldg 125 Exterior	381	470	-193.5	5000
18	Bldg 125 Exterior	413	444	-94.7	5000
19	Bldg 125 Exterior	481	425	115.2	5000
20	Bldg 125 Exterior	480	469	112.1	5000
21	Bldg 125 Exterior	396	509	-147.2	5000
22	Bldg 125 Exterior	485	416	127.5	5000
23	Bldg 125 Exterior	441	414	-8.5	5000
24	Bldg 125 Exterior	441	507	-8.3	5000
25	Bldg 125 Exterior	401	402	-131.7	5000
13 QC	Bldg 125 Exterior	385	463	-228.1	5000
12 QC	Bldg 125 Exterior	405	437	-157.9	5000



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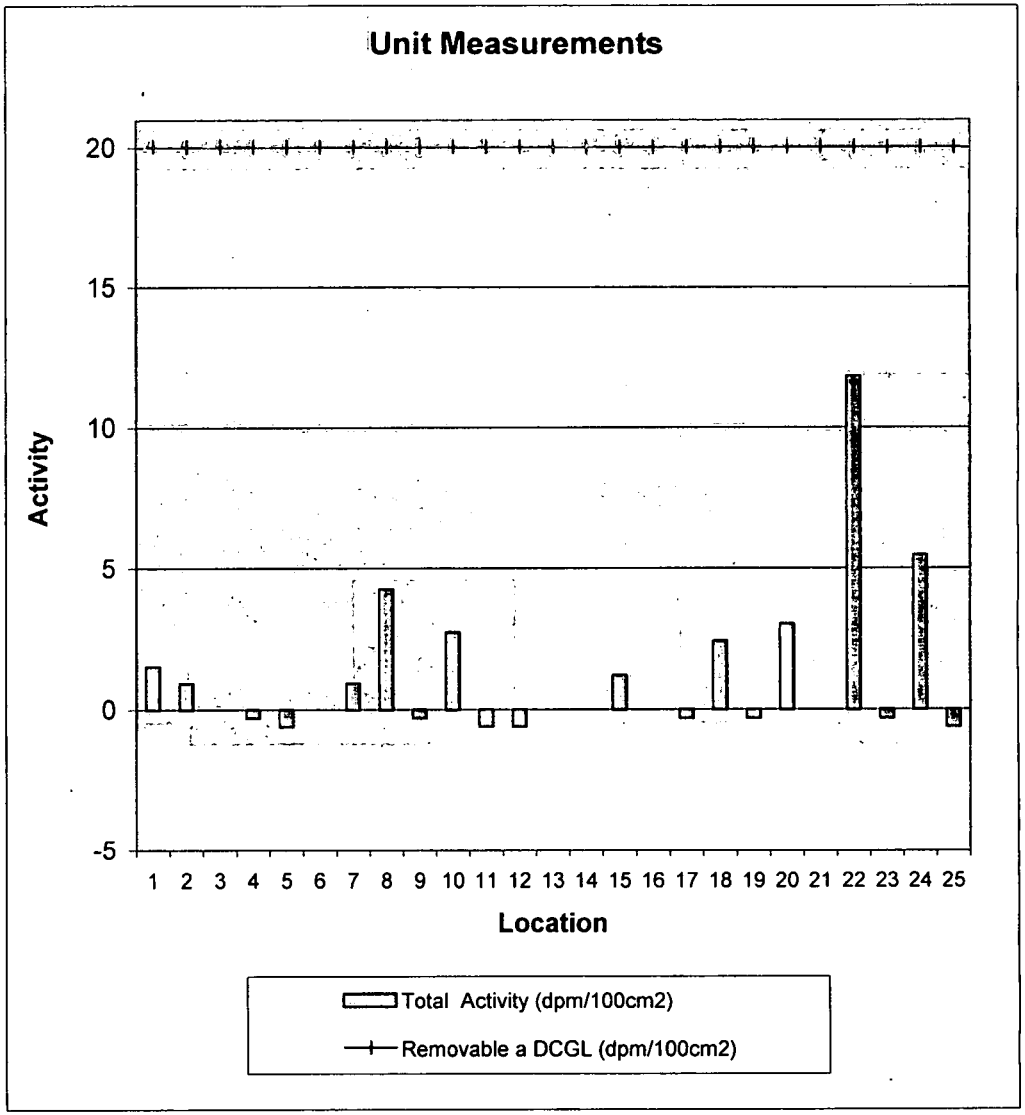
Removable Activity - Alpha

G10005

10/17/01

				1	2	3
			Instrument:	770	767	851
standard deviation:	2.7	max:	11.8	Instrument background:	0.1	0.2	0.0 cpm
mean:	1.2	min:	-0.6	Instrument efficiency:	33.0%	33.0%	33.0%
median:	0.0			Instrument MDA:	6.2	7.1	4.0 dpm

	Surface Location	Total Counts (cpm/100cm²)	Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Removable α DCGL (dpm/100cm²)
1	Bldg 125 Exterior	0.5	0.0	1.5	20
2	Bldg 125 Exterior	0.5	0.2	0.9	20
3	Bldg 125 Exterior	0.0	0.0	0.0	20
4	Bldg 125 Exterior	0.0	0.1	-0.3	20
5	Bldg 125 Exterior	0.0	0.2	-0.6	20
6	Bldg 125 Exterior	0.0	0.0	0.0	20
7	Bldg 125 Exterior	0.5	0.2	0.9	20
8	Bldg 125 Exterior	1.5	0.1	4.2	20
9	Bldg 125 Exterior	0.0	0.1	-0.3	20
10	Bldg 125 Exterior	1.0	0.1	2.7	20
11	Bldg 125 Exterior	0.0	0.2	-0.6	20
12	Bldg 125 Exterior	0.0	0.2	-0.6	20
13	Bldg 125 Exterior	0.0	0.0	0.0	20
14	Bldg 125 Exterior	0.0	0.0	0.0	20
15	Bldg 125 Exterior	0.5	0.1	1.2	20
16	Bldg 125 Exterior	0.0	0.0	0.0	20
17	Bldg 125 Exterior	0.0	0.1	-0.3	20
18	Bldg 125 Exterior	1.0	0.2	2.4	20
19	Bldg 125 Exterior	0.0	0.1	-0.3	20
20	Bldg 125 Exterior	1.0	0.0	3.0	20
21	Bldg 125 Exterior	0.0	0.0	0.0	20
22	Bldg 125 Exterior	4.0	0.1	11.8	20
23	Bldg 125 Exterior	0.0	0.1	-0.3	20
24	Bldg 125 Exterior	2.0	0.2	5.5	20
25	Bldg 125 Exterior	0.0	0.2	-0.6	20



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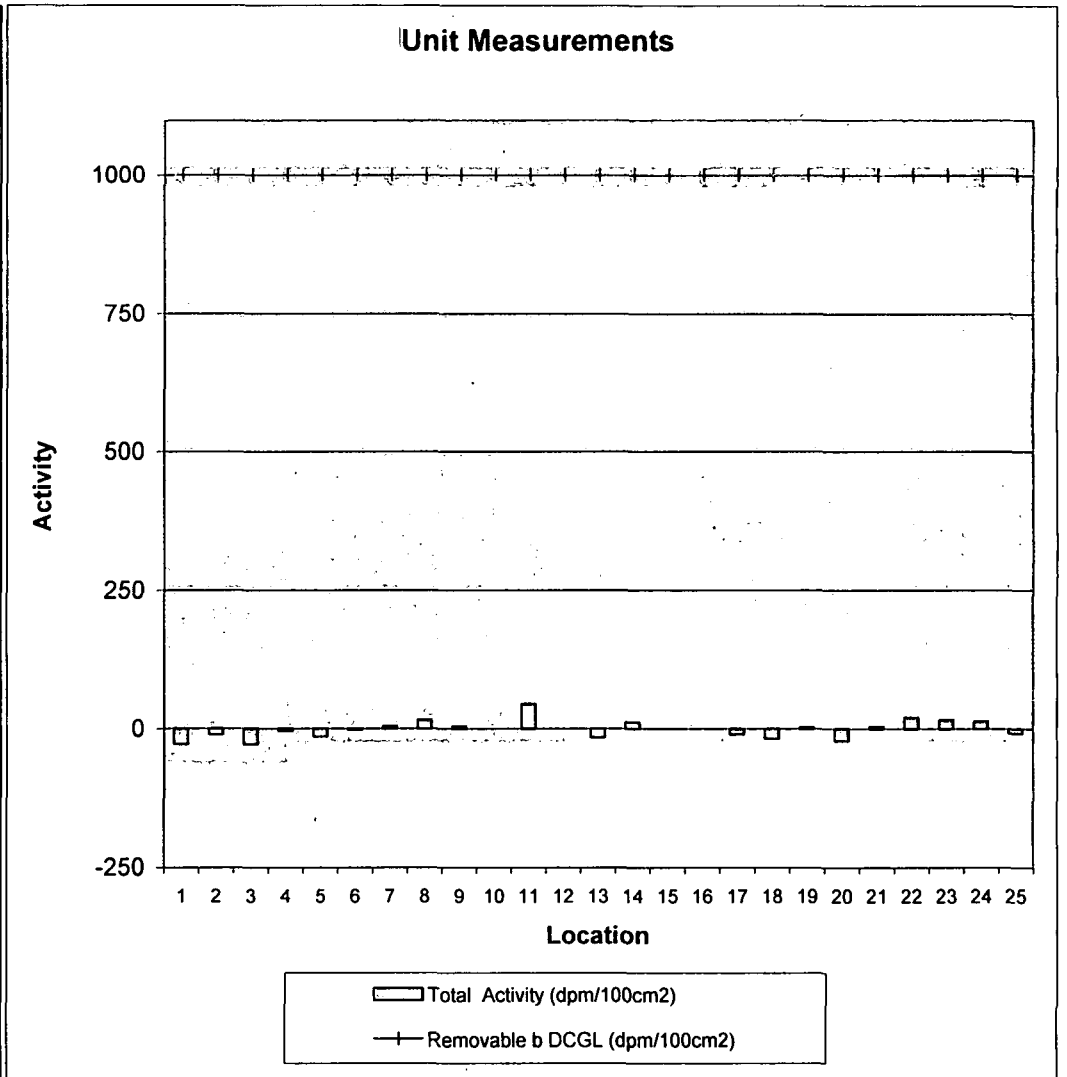
Removable Activity - Beta-Gamma

G10005

10/17/01

					4	5	6
				Instument:	835	911	700
standard deviation:	16.2	max:	44.0	Instrument background:	37.0	33.0	35.0 cpm
mean:	-1.0	min:	-28.0	Instrument efficiency:	25.0%	25.0%	25.0%
median:	0.0			Instrument MDA:	42.9	40.8	41.9 dpm

	Surface Location	Total Counts (cpm/100cm²)	Bkgd (cpm/100cm²)	Total Activity (dpm/100cm²)	Removable β DCGL (dpm/100cm²)
1	Bldg 125 Exterior	28.0	35.0	-28.0	1000
2	Bldg 125 Exterior	30.5	33.0	-10.0	1000
3	Bldg 125 Exterior	28.0	35.0	-28.0	1000
4	Bldg 125 Exterior	34.0	35.0	-4.0	1000
5	Bldg 125 Exterior	29.5	33.0	-14.0	1000
6	Bldg 125 Exterior	34.5	35.0	-2.0	1000
7	Bldg 125 Exterior	34.0	33.0	4.0	1000
8	Bldg 125 Exterior	41.0	37.0	16.0	1000
9	Bldg 125 Exterior	38.0	37.0	4.0	1000
10	Bldg 125 Exterior	37.0	37.0	0.0	1000
11	Bldg 125 Exterior	44.0	33.0	44.0	1000
12	Bldg 125 Exterior	33.0	33.0	0.0	1000
13	Bldg 125 Exterior	31.0	35.0	-16.0	1000
14	Bldg 125 Exterior	38.0	35.0	12.0	1000
15	Bldg 125 Exterior	37.0	37.0	0.0	1000
16	Bldg 125 Exterior	35.0	35.0	0.0	1000
17	Bldg 125 Exterior	34.5	37.0	-10.0	1000
18	Bldg 125 Exterior	28.5	33.0	-18.0	1000
19	Bldg 125 Exterior	37.5	37.0	2.0	1000
20	Bldg 125 Exterior	29.5	35.0	-22.0	1000
21	Bldg 125 Exterior	38.0	37.0	4.0	1000
22	Bldg 125 Exterior	42.0	37.0	20.0	1000
23	Bldg 125 Exterior	39.0	35.0	16.0	1000
24	Bldg 125 Exterior	36.5	33.0	14.0	1000
25	Bldg 125 Exterior	31.0	33.0	-8.0	1000



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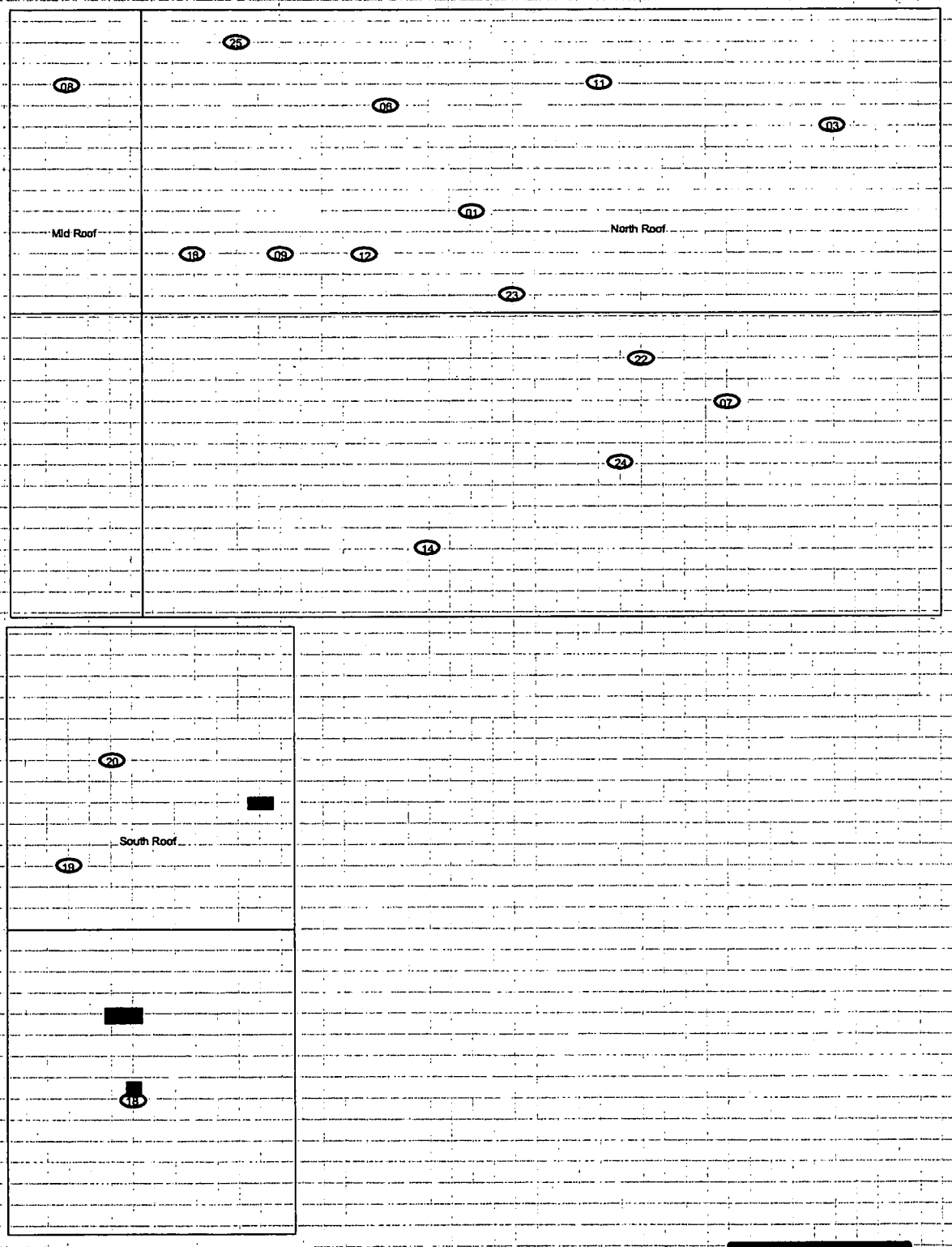
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit: G10005** **Classification: 3**
Building: 125
Survey Unit Description: Exterior

Total Roof Area: 1635 sq. m **Total Area: 2662 sq. m** **Grid Size: N/A**

SURVEY UNIT - MAP 1 OF 2



0 FEET 30

0 METERS 10

N

SURVEY MAP LEGEND
- Smear & TSC Location
- Smear, TSC & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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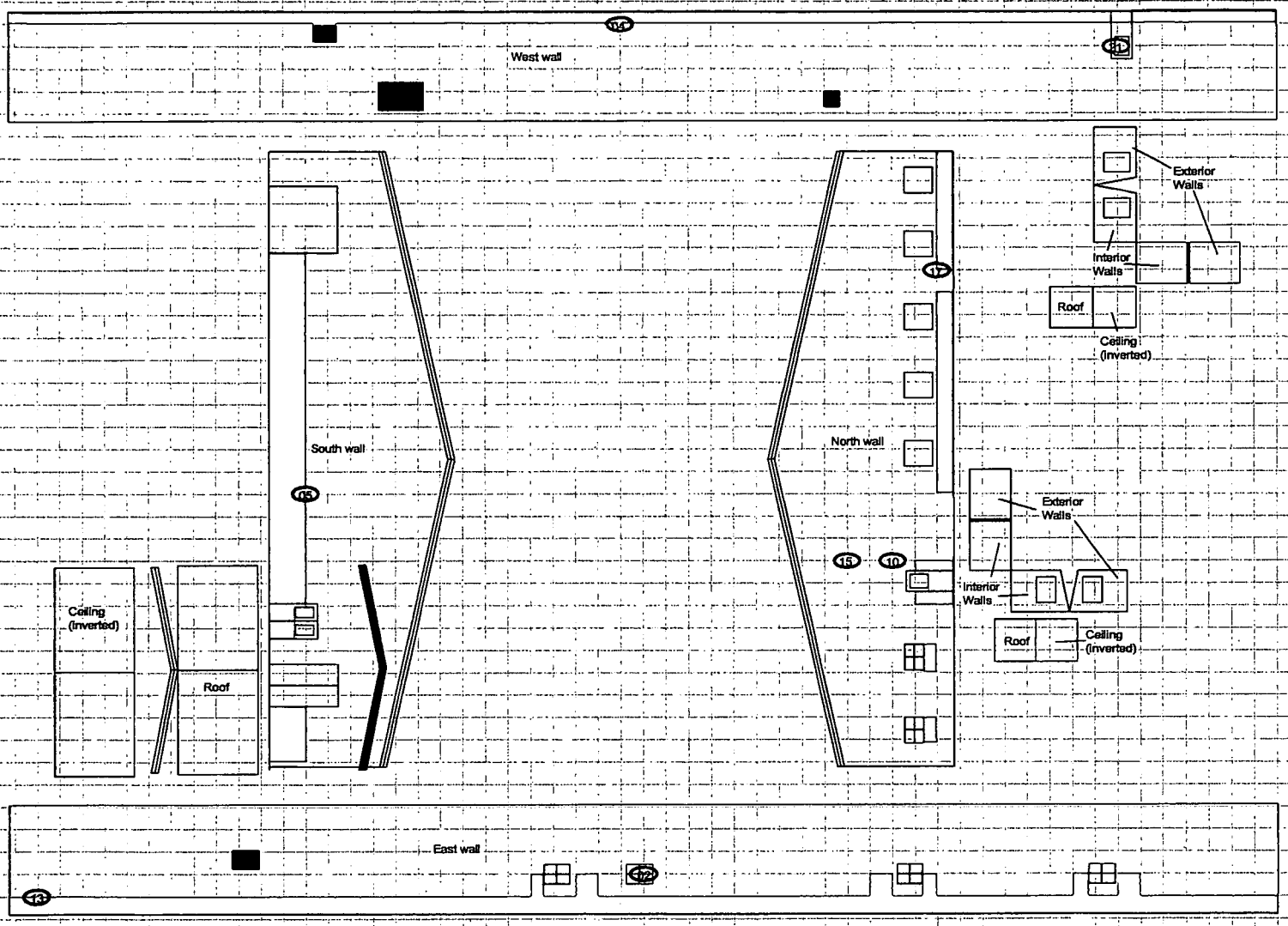
RADIOLOGICAL CLOSEOUT SURVEY FOR

Survey Area: A **Survey Unit:** G10005 **Classification:** 3
Building: 125
Survey Unit Description: Exterior

Total Floor Area: 1635 sq. m **Total Area:** 2662 sq. m **Grid Size:** N/A

SURVEY UNIT - MAP 2 OF 2



Scan Areas

SURVEY MAP LEGEND
- Smear & TSC Location
- Smear, TSC & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

0 FEET 30
0 METERS 10

N

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ATTACHMENT D

Chemical Data Summaries and Sample Maps

Asbestos Data Summary

Sample Number	Material Sampled & Location	Analytical Results
	B125	
125-10222001-315-101	Room 103, non-friable gray, rubbery window caulking	None Detected
125-10222001-315-102	Room 103, non-friable gray & white, hard window caulking	1% *Point Count* 0.5%
125-10222001-315-103	Room 104, friable gray & white, hard window caulking	1% *Point Count* 0.25%
125-10222001-315-104	Room 104, friable gray & white, hard window caulking	1% *Point Count* 0.25%
125-10222001-315-105	Room 108, friable gray & white, hard window caulking	2% *Point Count* 0.75%
125-10222001-315-106	Room 125, friable, gross TSI debris on floor of Mech. Room	None Detected
125-10222001-315-107	Room 105A, friable gray & white, hard window caulking	1% *Point Count* 0.25%
125-10222001-315-108	Room 108A, friable gray & white, hard window caulking	2% *Point Count* 0.75%
125-10222001-315-109	Exterior, White caulking at base of exterior, corrugated metal wall, north side	2% *Point Count* 0.5%
125-10222001-315-110	Exterior, White caulking at base of exterior, corrugated metal wall, north side	1% *Point Count* 0.75%
125-10222001-315-111	Exterior, White caulking at base of exterior, corrugated metal wall, west side	4%
125-10222001-315-112	Exterior, White caulking at base of exterior, corrugated metal wall, west side	4%
125-10222001-315-113	Exterior, Black, rubbery caulking around exhaust louvers, east side	None Detected
125-10222001-315-114	Exterior, White caulking at base of exterior, corrugated metal wall, east side	2% *Point Count* 1.25%
125-10222001-315-115	Exterior , White caulking at base of exterior, corrugated metal wall, east side	2% *Point Count* 1.5%

ASBESTOS INSPECTION

AND

OPERATIONS AND MAINTENANCE PLAN

FOR

BUILDING 125

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

SECTION I

(INTRODUCTION, METHODOLOGY, ASBESTOS INSPECTION)

PREPARED FOR

U.S. DEPARTMENT OF ENERGY
ROCKY FLATS FIELD OFFICE, BUILDING B131
P.O. BOX 928
GOLDEN, COLORADO 80402

PROJECT NO. 108230

DECEMBER 31, 1996

SITEX
Environmental, Inc.

11905 Borman Drive
St. Louis, MO 63146

(314) 569-1119

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SITEX

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Section II (Cont.)

Section III

SITEX

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Section I

SITEX

INTRODUCTION

SITEX Environmental, Inc. (SITEX) was retained by the U.S. Department of Energy, Rocky Flats Field Office in Golden, Colorado to conduct an asbestos inspection and develop an operations and maintenance plan (O&M) for Building 125 located at the Rocky Flats Environmental Technology Site on U.S. Highway 93 in Golden, Colorado. This site is presently an industrial complex which was formerly used to manufacture nuclear weapons.

The asbestos inspection and O&M plan preparation was conducted in accordance with applicable asbestos regulations of the Occupational Safety and Health Administration (OSHA) and U.S. Environmental Protection Agency (EPA). Pertinent OSHA asbestos regulations are contained in Title 29 of the Code of Federal Regulations (CFR), Parts 1910.1001 and 1926.1101. EPA asbestos regulations adhered to were based on the Asbestos School Hazard Abatement Reauthorization Act (ASHARA) which amended the Asbestos Hazard Emergency Response Act (AHERA) or Title II of the Toxic Substance Control Act (TSCA) to extend training and accreditations described in the asbestos Model Accreditation Plan (MAP) to public and commercial buildings. AHERA was originally mandated to address asbestos-containing building materials located in public and private schools grades kindergarten through 12th. Regulations concerning ASHARA, AHERA and MAP are found in Title 40 of the CFR Part 763. OSHA and EPA regulations are presented in Appendices A through E.

The asbestos inspection included the collection of bulk material samples of suspect asbestos-containing materials in the form of surfacing materials, thermal system insulation and miscellaneous materials. The sampled materials are identified by space locations, area descriptions, sample numbers, photographic numbers and bulk material sample results. Asbestos-containing materials are further defined by material classification with a recommended response actions. Bulk sample results and a photographic log contain the percent and type of asbestos found in sampled materials and the photograph number of the photograph depicting the sampled material. Also presented are potential exposure concerns and a drawing indicating the spaces where asbestos-containing materials are located.

The O&M plan contains procedures to allow qualified asbestos personnel to properly address small-scale, short duration asbestos projects and record keeping forms to assist in documenting abatement projects conducted by qualified contractors. The projects would encompass asbestos removal, repair, encapsulation, enclosure or an emergency response or scheduled maintenance procedure.

This document, particularly the O&M plan, requires continual updating and record keeping by a qualified designated person of all activities related to asbestos-containing material and a current evaluation of their present and future exposure potentials. Material condition and potential for damage could change significantly with time. The owner is required to periodically reinspect the asbestos-containing materials or presumed asbestos-containing materials found in this building due to the potential changes in material condition. The qualified designated person should also ensure that all information is in accordance with current asbestos regulations. Regulations found in OSHA, EPA and the State of Colorado publications shall take precedence over this document at all times.

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METHODOLOGY

Building 125 was inspected for suspect asbestos-containing materials which included surfacing materials, thermal system insulation and miscellaneous materials. Each material was identified by space number, quantified and then assessed for condition. Bulk material samples were collected of each suspect material utilizing AHERA and OSHA sampling protocols. Homogeneous determinations were made for asbestos-containing thermal system insulation which extended into more than one building space. All other materials (surfacing and miscellaneous) were described for each building space which eliminated the need to identify homogeneous spaces. The advantage of this strategy was to allow the users of this report immediate information regarding the asbestos-containing materials in any given space and not have to rely on a group of functional spaces which would define a homogeneous area.

Bulk material samples of suspect asbestos-containing materials were analyzed by polarized light microscopy (PLM) analysis with dispersion staining (DS) using EPA Method 600 IR-93/116 which is the present analytical method recommended by EPA. Analysis was performed by International Asbestos Testing Laboratory (IATL) located at 16000 Horizon Way, Unit 100 in Mount Laurel, New Jersey. IATL is accredited or approved by the National Institute of Science and Technology-National Voluntary Laboratory Accreditation Program (NIST-NVLAP), American Industrial Hygiene Association (AIHA) and Proficiency Analytical Testing (PAT) program. Laboratory analysis and qualifications for IATL are presented in Appendix F.

The O&M plan was developed using a combination of OSHA regulations and industry standards which are published in a variety of EPA documents. Recommended response actions were determined according to asbestos material condition; whether it was friable and its potential for present and future release of asbestos fibers. The adopted rating system was based on a subjective evaluation which included "low", "moderate" and "high" priority. Low would indicate a priority of concern less than moderate or high. Moderate would indicate a priority of concern higher than low and less than high and so on for high. Some ratings were also presented as a combination of low, moderate and high such as low to moderate or moderate to high.

ASBESTOS INSPECTION

The findings of the asbestos inspection and assessment determinations for Building 125 are documented on the Space Inventory and Recommended Response Action form, the Bulk Sample Results and Photographic Log form and the Present and Future Exposure Potential forms.

Space Inventory and Recommended Response Action Form

The Space Inventory and Recommended Response Action form includes the space number, asbestos material, material classification, approximate quantity, material condition and recommended response action. The **space number** indicates the area which was inspected for suspect asbestos-containing materials. **Asbestos materials** refer to the confirmed asbestos-containing materials which were in the inspected space. **Material classification** describes whether the asbestos material

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ASBESTOS INSPECTION (CONT.)

Space Inventory and Recommended Response Action Form (Cont.)

was friable, Category I nonfriable or Category II nonfriable which are defined in Section II of this report. The **approximate quantity** indicates the amount of the particular asbestos material present in a space. **Present condition** indicates the present condition of the asbestos material and the type and amount of damage, if any. The **recommended response action** was based on material classification and present condition. The recommended response action was chosen to minimize fiber exposure to building occupants and the environment.

Bulk Sample Results and Photographic Log Form

The Bulk Sample Results and Photographic Log form is composed of the space number, description of area, sample number, material sampled, photograph number and results. The **space number** is the same as previously mentioned. The **description of area** provides recognizable names which indicate the activity or function of the space. The **sample number** consists of the building number followed by standard counting numbers to indicate a unique sample number. **Material sampled** refers to the actual sampled material in a particular space. The **photograph number** indicates the photographs taken of bulk material samples and details of building spaces. **Results** are the determined laboratory analysis of the collected bulk material samples.

Present and Future Exposure Potential Form

The Present and Future Exposure Potential form consists of headings stating space number, asbestos material, friable, present condition, damage potential and exposure potential. Exposure potential is subdivided into headings of present (no response action); future (response action completed); and future (response action not completed). The **space number**, **asbestos material** and **present condition** were previously defined. **Friable** warrants a yes or no response based on whether the material is friable or nonfriable. **Damage potential** is indicated as low, moderate or high which is based on damage from physical contact, material location and deterioration factors such as air movement, vibration and water damage. The **exposure potential** also indicated as low, moderate or high is based on the asbestos material, whether it is friable, the present condition and the damage potential. Exposure potential is further defined as **present** with no response action being performed and **future** with and without the recommended response action being completed.

Inspection Findings

The completed Space Inventory and Recommended Response Action form, Bulk Sample Results and Photographic Log form and Present and Future Exposure Potential form for Building 125 are as follows. Also presented is a building drawing which indicates space numbers, asbestos materials present and photograph numbers. The photographs which are referred to in the Space Inventory and Recommended Response Action form, the Bulk Sample Results and Photographic Log form and the drawing are presented following the building drawing.

SITEX

BUILDING 125

Space Inventory and Recommended Response Action

SPACE INVENTORY AND RECOMMENDED RESPONSE ACTION

Building No: 125
Location: Rocky Flats

Date: October 10, 1996

Space No.	Asbestos Material	Material Classification	Approximate Quantity	Material Condition	Recommended Response Action
100	9" x 9" floor tile, beige	nonfriable, I	380 square feet	no damage	operations and maintenance
100	9" x 9" floor tile, tan	nonfriable, I	190 square feet	no damage	operations and maintenance
100	12" x 12" floor tile, white, beneath water fountain	nonfriable, I	10 square feet	no damage	operations and maintenance
100	flooring and mastic beneath carpet	nonfriable, I	60 square feet	no damage	operations and maintenance
100	piping, near yellow ladder	friable	80 square feet	no damage	operations and maintenance
100	cementitious wall	nonfriable, II	700 square feet	no damage	operations and maintenance
100	expansion joint	nonfriable, II	20 square feet	no damage	operations and maintenance
100	pipe elbows/fittings, outside Space 108D	friable	4	4/damaged	repair/operations and maintenance
100	pipe elbows/fittings (above ceiling)	friable	100	8/damaged	reapir/operations and maintenance
101	9" x 9" floor tile, beige	nonfriable, I	40 square feet	no damage	operations and maintenance
102	flooring beneath carpet	nonfriable, I	225 square feet	no damage	operations and maintenance
103	9" x 9" floor tile, beige	nonfriable, I	425 square feet	no damage	operations and maintenance

SPACE INVENTORY AND RECOMMENDED RESPONSE ACTION

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Asbestos Material	Material Classification	Approximate Quantity	Material Condition	Recommended Response Action
104	9" x 9" floor tile, green	nonfriable, I	350 square feet	no damage	operations and maintenance
104	9" x 9" floor tile, beige	nonfriable, I	80 square feet	no damage	operations and maintenance
104	pipe elbows	friable	4	no damage	operations and maintenance
104A	9" x 9" floor tile, beige	nonfriable, I	225 square feet	no damage	operations and maintenance
105	9" x 9" floor tile, green	nonfriable, I	225 square feet	no damage	operations and maintenance
105A	9" x 9" floor tile, beige	nonfriable, I	225 square feet	no damage	operations and maintenance
106	9" x 9" floor tile, beige	nonfriable, I	225 square feet	no damage	operations and maintenance
107	9" x 9" floor tile, green	nonfriable, I	425 square feet	no damage	operations and maintenance
108	9" x 9" floor tile, green	nonfriable, I	100 square feet	no damage	operations and maintenance
108A	flooring beneath carpet	nonfriable, I	225 square feet	no damage	operations and maintenance
108B	flooring beneath carpet	nonfriable, I	225 square feet	no damage	operations and maintenance
108C	pipe elbows, above ceiling	friable	8	no damage	operations and maintenance
108C	fume hood cementitious panels	nonfriable, II	25 square feet	no damage	operations and maintenance
112	pipe elbows/fittings, above ceiling	friable	10	no damage	operations and maintenance

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SPACE INVENTORY AND RECOMMENDED RESPONSE ACTION

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Asbestos Material	Material Classification	Approximate Quantity	Material Condition	Recommended Response Action
115	sheeting flooring, beige	nonfriable, I	550 square feet	no damage	operations and maintenance
116	sheet flooring, beige	nonfriable, I	600 square feet	no damage	operations and maintenance
117	9" x 9" floor tile, beige	nonfriable, I	550 square feet	no damage	operations and maintenance
118	9" x 9" floor tile, beige	nonfriable, I	550 square feet	no damage	operations and maintenance
119	9" x 9" floor tile, beige	nonfriable, I	550 square feet	no damage	operations and maintenance
120	flooring beneath carpet	nonfriable, I	225 square feet	no damage	operations and maintenance
120	blocks attached to gas expansion equipment	nonfriable, II	12 square feet	no damage	operations and maintenance
121	flooring beneath carpet	nonfriable, I	225 square feet	no damage	operations and maintenance
122A	pipe elbow/fittings	friable	25	5/damaged	repair/operations and maintenance
123	9" x 9" floor tile, beige	nonfriable, I	225 square feet	no damage	operations and maintenance
125	piping	friable	225 linear feet	<3 linear feet/damaged	repair/operations and maintenance
125	pipe elbow/fittings	friable	100	<10/damaged	repair/operations and maintenance

SPACE INVENTORY AND RECOMMENDED RESPONSE ACTION

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Asbestos Material	Material Classification	Approximate Quantity	Material Condition	Recommended Response Action
125	expansion tank (2)	friable	6 square feet	no damage	operations and maintenance
126	2' x 4' ceiling tile	friable	70 square feet	no damage	operations and maintenance

Sylvester B. Douglas
Management Planner/Inspector's Name

Sylvester Douglas
Signature

[redacted]
Management Planner/Inspector ID

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SITEX

BUILDING 125

Bulk Sample Results and Photographic Log

BULK SAMPLE RESULTS AND PHOTOGRAPHIC LOG

Building No: 125
Location: Rocky Flats

Date: October 10, 1996

Space No.	Description of Area	Sample No.	Material Samples	Photo No.	Results
00	Common Area	125-073	12" x 12" floor tile, white	52	None Detected
100	Hall	125-054	9" x 9" floor tile, light green	35	<1% Chrysotile (tile) None Detected (mastic)
100	Hall	125-055	9" x 9" floor tile, beige	36	10% Chrysotile (tile) 5% Chrysotile (mastic)
100	Hall	125-056	12" x 12" floor tile, white	35	None Detected
100	Hall	125-057	9" x 9" floor tile, tan	35	4% Chrysotile (tile) None Detected (mastic)
100	Hall	125-058	flooring beneath carpet, outside Space 126	39	5% Chrysotile (tile) 6% Chrysotile (mastic)
100	Hall	125-059	pipe, condensate steam purge above ceiling	40	35% Amosite
100	Hall	125-060	pipe, steam 125 above ceiling	40	15% Chrysotile
100	Hall	125-074	12" x 12" floor tile, white beneath water fountain	53	10% Chrysotile (tile) 10% Chrysotile (mastic)
100	Hall	125-076	cementitious wall	55	35% Chrysotile
100	Hall	125-081	expansion joint, building addition	59	70% Chrysotile

BULK SAMPLE RESULTS AND PHOTOGRAPHIC LOG

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Description of Area	Sample No.	Material Samples	Photo No.	Results
100	Hall	125-082	pipe elbow, domestic water above ceiling	60	5.3% Chrysotile 4.5% Amosite
101	Office	125-062	flooring beneath carpet, east door	42	None Detected (tile) None Detected (mastic)
101	Office	125-063	9" x 9" floor tile, beige	43	15% Chrysotile
101E	Office	125-061	straw wall	41	None Detected
108	Office	125-071	9" x 9" floor tile, green	50	1.8% Chrysotile (tile) None Detected (mastic)
108	Office	125-072	cementitious wall	51	30% Chrysotile
108C	Laboratory	125-069	cementitious panels in fumehood	48	30% Chrysotile
108C	Laboratory	125-070	counter material	49	None Detected
109	Equipment Area	125-068	2' x 4' ceiling tile	47	None Detected
114	Office	125-067	12" x 12" floor tile, white	46	None Detected (tile) None Detected (mastic)
115	Laboratory	125-079	sheet flooring, beige	57	25% Chrysotile (flooring) None Detected (mastic)

BULK SAMPLE RESULTS AND PHOTOGRAPHIC LOG

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Description of Area	Sample No.	Material Samples	Photo No.	Results
116	Laboratory	125-080	lab table material	58	None Detected
119	Laboratory	125-075	sink counter	54	None Detected
119	Laboratory	125-077	pipe elbow/fitting domestic cold water	56	None Detected
119	Laboratory	125-078	pipe elbow/fitting domestic hot water	56	None Detected
120	Laboratory	125-064	blocks attached to gas expansion equipment	44	70% Chrysotile
122A	Pipechase	125-065	pipe elbow, domestic cold water	45	3% Chrysotile, 2% Amosite
122A	Pipechase	125-066	pipe elbow, domestic hot water	45	4% Chrysotile, 3% Amosite
125	Mechanical Room	125-001	pipe elbow, domestic cold water	1	20% Amosite
125	Mechanical Room	125-002	pipe elbow, domestic hot water	2	Not Analyzed
125	Mechanical Room	125-003	pipe elbow, domestic hot water return	3	Not Analyzed
125	Mechanical Room	125-004	drywall	4	None Detected

BULK SAMPLE RESULTS AND PHOTOGRAPHIC LOG

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Description of Area	Sample No.	Material Samples	Photo No.	Results
125	Mechanical Room	125-005	pipe elbow, heating water supply	5	5% Amosite
125	Mechanical Room	125-006	pipe, unlabeled beneath Sample 125-006	6	None Detected
125	Mechanical Room	125-007	pipe elbow, domestic cold water	7	2% Chrysotile, 3% Amosite
125	Mechanical Room	125-008	expansion tank insulation	8	15% Chrysotile, 15% Amosite
125	Mechanical Room	125-009	expansion tank insulation	8	Not Analyzed
125	Mechanical Room	125-010	expansion tank insulation	8	Not Analyzed
125	Mechanical Room	125-011	pipe, steam 15	9	65% Amosite
125	Mechanical Room	125-012	pipefitting, steam 15	9	20% Amosite
125	Mechanical Room	125-013	pipe elbow, domestic cold water	13	3% Chrysotile, 2% Amosite
125	Mechanical Room	125-014	pipefitting, cooling water supply	14	20 % Chrysotile
125	Mechanical Room	125-015	pipefitting, cooling water return	14	Not Analyzed

BULK SAMPLE RESULTS AND PHOTOGRAPHIC LOG

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Description of Area	Sample No.	Material Samples	Photo No.	Results
125	Mechanical Room	125-016	pipe, steam 15	12	30% Amosite
125	Mechanical Room	125-017	pipe elbow, steam 15	12	8% Chrysotile, 2% Amosite
125	Mechanical Room	125-018	pipe elbow, heating water return	12	2% Chrysotile, 3% Amosite
125	Mechanical Room	125-019	pipe elbow, heating water supply	16	Not Analyzed
125	Mechanical Room	125-020	pipe, heating water supply, labeled asbestos	11	None Detected
125	Mechanical Room	125-021	pipe, condensate steam	10	15% Amosite
125	Mechanical Room	125-022	pipe elbow, condensate steam	10	3% Chrysotile, 2% Amosite
125	Mechanical Room	125-023	fiber glass ductwrap	21	None Detected
125	Mechanical Room	125-024	gray vibration isolator	22	None Detected
125	Mechanical Room	125-025	fiber glass ductwrap	15	None Detected
125	Mechanical Room	125-026	cloth vibration isolator return	15	None Detected
125	Mechanical Room	125-027	pipe elbow, freon line	17	3% Chrysotile, 2% Amosite

BULK SAMPLE RESULTS AND PHOTOGRAPHIC LOG

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Description of Area	Sample No.	Material Samples	Photo No.	Results
125	Mechanical Room	125-028	pipefitting, cooling water supply	19	1% Amosite
125	Mechanical Room	125-029	pipefitting, cooling water return	19	Not Analyzed
125	Mechanical Room	125-030	fiber glass ductwrap	26	None Detected
125	Mechanical Room	125-031	black vibration isolator	27	None Detected
125	Mechanical Room	125-032	expansion tank insulation	28	10% Chrysotile
125	Mechanical Room	125-033	expansion tank insulation	28	Not Analyzed
125	Mechanical Room	125-034	expansion tank insulation	28	Not Analyzed
125	Mechanical Room	125-035	pipe insulation, steam 125	29	10% Chrysotile, 15% Amosite
125	Mechanical Room	125-036	pipe elbow, steam 125	29	3% Chrysotile, 3% Amosite
125	Mechanical Room	125-037	pipe, steam 15	32	Not Analyzed
125	Mechanical Room	125-038	pipe elbow, steam 15	32	Not Analyzed
125	Mechanical Room	125-039	black vibration isolator	31	None Detected
125	Mechanical Room	125-040	pipe elbow, domestic cold water	24	None Detected

BULK SAMPLE RESULTS AND PHOTOGRAPHIC LOG

Building No: 125 (Cont.)
Location: Rocky Flats

Date: October 10, 1996

Space No.	Description of Area	Sample No.	Material Samples	Photo No.	Results
125	Mechanical Room	125-041	pipe elbow, domestic hot water	23	3% Chrysotile, 3% Amosite
125	Mechanical Room	125-042	pipefitting, domestic cold water	30	Not Analyzed
125	Mechanical Room	125-043	pipe, condensate steam	18	20% Amosite
125	Mechanical Room	125-044	pipe elbow, condensate steam	18	2% Chrysotile, 3% Amosite
125	Mechanical Room	125-045	duct seam tape	25	None Detected
125	Mechanical Room	125-046	pipefitting, cooling water return	20	3% Chrysotile, 5% Amosite
125	Mechanical Room	125-047	pipefitting, cooling water supply	20	Not Analyzed
126	Closet	125-048	12" x 12" floor tile, white	33	<1% Chrysotile (tile) None Detected (mastic)
126	Closet	125-049	base molding, brown	33	None Detected
126	Closet	125-050	2' x 4' ceiling tile	34	<1% Chrysotile, 3% Amosite
126	Closet	125-051	drywall	37	None Detected

BULK SAMPLE RESULTS AND PHOTOGRAPHIC LOG

Building No: 125
Location: Rocky Flats

Date: October 10, 1996

Space No.	Description of Area	Sample No.	Material Samples	Photo No.	Results
126	Closet	125-052	pipe elbow, hot water supply	38	5% Chrysotile, 2% Amosite
126	Closet	125-053	pipefitting, hot water return	38	Not Analyzed
	Above Ceiling		east area, looking south	61	
	Above Ceiling		above laboratories, looking southwest	62	
	Above Ceiling		north area, looking west	63	
Exterior	Roof, East Side	25	roof		None Detected

Asbestos inspection, assessment and sampling have been conducted by an EPA and state of Colorado accredited inspector in accordance with 40 CFR 763, who has completed an approved course under the Asbestos Hazard Emergency Response Act (AHERA).

[redacted]
Inspector's Certification No.

Sylvester B. Douglas
Name

Sylvester Douglas
Signature of Inspector

SITEX

BUILDING 125

Present and Future Exposure Potential

PRESENT AND FUTURE EXPOSURE POTENTIAL

Building No: 125
Location: Rocky Flats

Date: Ocober 10, 1996

Sylvester B. Douglas
Management Planner/Inspector's Name

Sylvester Douglas
Signature

[redacted]
Management Planner/Inspector ID

					EXPOSURE POTENTIAL		
					Present	Future	
Space No.	Asbestos Material	Friable	Present Condition	Damage Potential	No Response Action	Response Action Completed	Response Action Not Completed
100	9" x 9" floor tile, beige	no	no damage	low	low	low	low
100	9" x 9" floor tile, tan	no	no damage	low	low	low	low
100	12" x 12" floor tile, white, beneath water fountain	no	no damage	low	low	low	low
100	flooring and mastic beneath carpet	no	no damage	low	low	low	low
100	piping, near yellow ladder	yes	no damage	low	low	low	low to moderate
100	cementitious wall	no	no damage	low	low	low	low
100	expansion joint	no	no damage	low	low	low	low

PRESENT AND FUTURE EXPOSURE POTENTIAL (CONT.)

Building No: 125
Location: Rocky Flats

Date: Ocober 10, 1996

Sylvester B. Douglas
Management Planner/Inspector's Name

Signature

[redacted]
Management Planner/Inspector ID

					EXPOSURE POTENTIAL		
					Present	Future	
Space No.	Asbestos Material	Friable	Present Condition	Damage Potential	No Response Action	Response Action Completed	Response Action Not Completed
100	pipe elbows/fittings, outside Space 108D	yes	no damage	low to moderate	low to moderate	low	low to moderate
100	pipe elbows/fittings (above ceiling)	yes	8 damaged	low	low to moderate	low	low to moderate
101	9" x 9" floor tile, beige	no	no damage	low	low	low	low
102	flooring beneath carpet	no	no damage	low	low	low	low
103	9" x 9" floor tile, beige	no	no damage	low	low	low	low
104	9" x 9" floor tile, green	no	no damage	low	low	low	low
104	9" x 9" floor tile, beige	no	no damage	low	low	low	low
104	pipe elbows	yes	no damage	low	low	low	low
104A	9" x 9" floor tile, beige	no	no damage	low	low	low	low

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PRESENT AND FUTURE EXPOSURE POTENTIAL (CONT.)

Building No: 125
Location: Rocky Flats

Date: Ocober 10, 1996

Sylvester B. Douglas
Management Planner/Inspector's Name

Signature

[redacted]
Management Planner/Inspector ID

					EXPOSURE POTENTIAL		
					Present	Future	
Space No.	Asbestos Material	Friable	Present Condition	Damage Potential	No Response Action	Response Action Completed	Response Action Not Completed
105	9" x 9" floor tile, green	no	no damage	low	low	low	low
105A	9" x 9" floor tile, beige	no	no damage	low	low	low	low
106	9" x 9" floor tile, beige	no	no damage	low	low	low	low
107	9" x 9" floor tile, green	no	no damage	low	low	low	low
108	9" x 9" floor tile, green	no	no damage	low	low	low	low
108A	flooring beneath carpet	no	no damage	low	low	low	low
108B	flooring beneath carpet	no	no damage	low	low	low	low
108C	pipe elbows, above ceiling	yes	no damage	low	low	low	low
108C	fume hood cementitious panels	no	no damage	low	low	low	low

PRESENT AND FUTURE EXPOSURE POTENTIAL (CONT.)

Building No: 125
Location: Rocky Flats

Date: Ocober 10, 1996

Sylvester B. Douglas
Management Planner/Inspector's Name

SD
Signature

[redacted]
Management Planner/Inspector ID

					EXPOSURE POTENTIAL		
					Present	Future	
Space No.	Asbestos Material	Friable	Present Condition	Damage Potential	No Response Action	Response Action Completed	Response Action Not Completed
112	pipe elbows/fittings, above ceiling	yes	no damage	low	low	low	low
115	sheeting flooring, beige	no	no damage	low	low	low	low to moderate
116	sheet flooring, beige	no	no damage	low	low	low	low
117	9" x 9" floor tile, beige	no	no damage	low	low	low	low
118	9" x 9" floor tile, beige	no	no damage	low	low	low	low
119	9" x 9" floor tile, beige	no	no damage	low	low	low	low
120	flooring beneath carpet	no	no damage	low	low	low	low
120	blocks attached to gas expansion equipment	no	no damage	low to mod.	low to mod.	low	low to moderate
121	flooring beneath carpet	no	no damage	low	low	low	low

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PRESENT AND FUTURE EXPOSURE POTENTIAL (CONT.)

Building No: 125
Location: Rocky Flats

Date: Ocober 10, 1996

Sylvester B. Douglas
Management Planner/Inspector's Name

SD
Signature

[redacted]
Management Planner/Inspector ID

					EXPOSURE POTENTIAL		
					Present	Future	
Space No.	Asbestos Material	Friable	Present Condition	Damage Potential	No Response Action	Response Action Completed	Response Action Not Completed
122A	pipe elbow/fittings	yes	5 damaged	low to mod.	low	low	low to moderate
123	9" x 9" floor tile, beige	no	no damage	low	low	low	low
125	piping		<3 linear feet damaged	low	low to mod.	low	low to moderate
125	pipe elbow/fittings	yes	<10 linear feet damaged	low	low to mod.	low	low to moderate
125	expansion tank (2)	yes	no damage	low	low	low	low to moderate
126	2' x 4' ceiling tile	yes	no damage	low	low	low	low to moderate

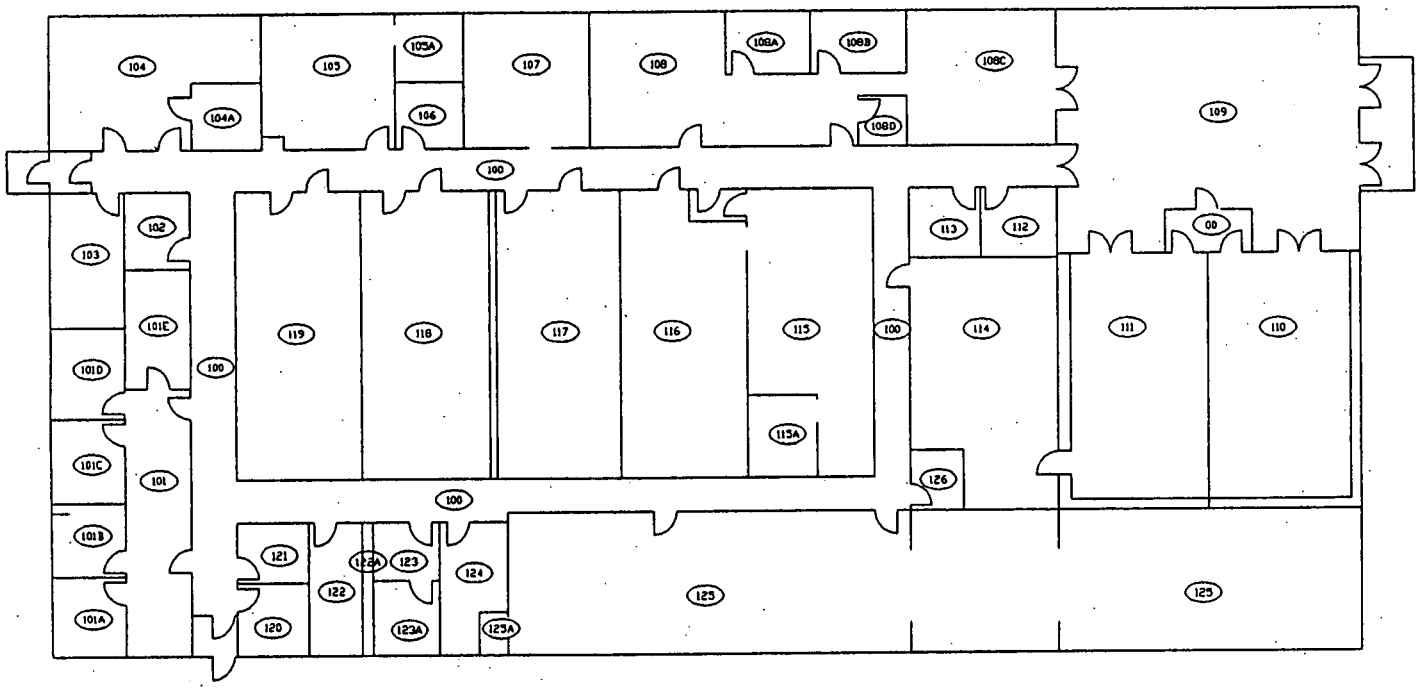
SITEX

BUILDING 125

Drawing

100

BUILDING 125



FLOOR PLAN

ASBESTOS NOTES

Space	Asbestos Material	Photo No.
100	floor tile; pipe; walls expansion joint	35, 36, 39, 40, 53, 55, 59, 60
101	floor tile	43
102	flooring	
103	floor tile	
104	floor tile; pipe	
104A	floor tile	
105	floor tile	
105A	floor tile	
106	floor tile	
107	floor tile	
108	floor tile	50, 51
108A	flooring	
108B	flooring	
108C	pipe (above ceiling); fume hood	48
112	pipe	
115	sheet flooring	57
116	sheet flooring	
117	floor tile	
118	floor tile	
119	floor tile	
120	flooring, equipment block	44
121	flooring	
122A	pipe	45
123	floor tile	
125	pipe; expansion tank	1-32
126	ceiling tile	34

Note: Asbestos-containing building materials were not found in Spaces:

00, 109, 110, 111, 113, 114, 124

LEGEND

Space No.

Wall

101

DR. AJ	CK.	ASBESTOS INSPECTION	U.S. DEPARTMENT OF ENERGY ROCKY FLATS FIELD OFFICE GOLDEN, COLORADO 80402
JOB NO.		SITEX Environmental Inc. 11905 Borman Drive St. Louis, MO 63146	NO. DATE / REMARKS
DATE 10-31-98			BUILDING 125
SHEET NO. ASB-1			

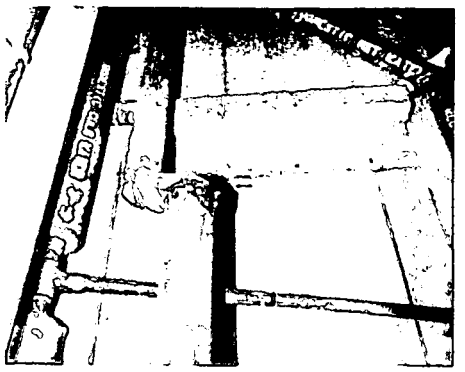
SITEX

BUILDING 125

Photographs

SITEX

1



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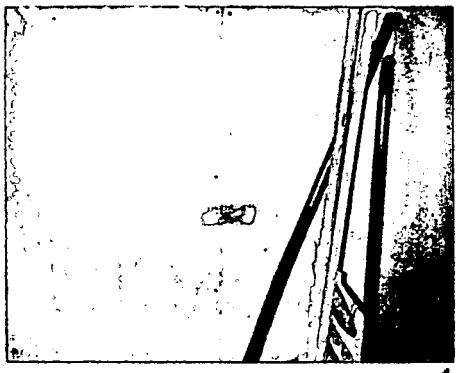

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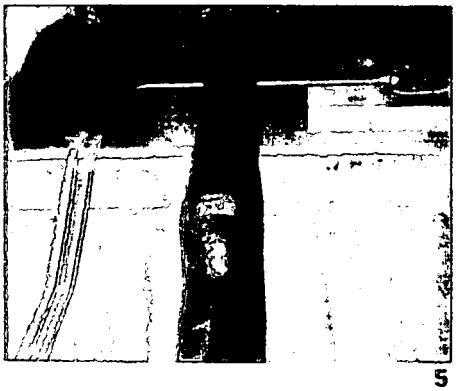

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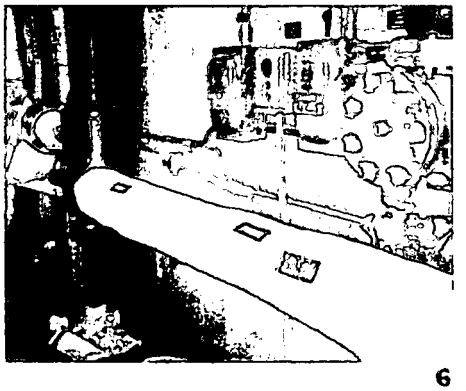

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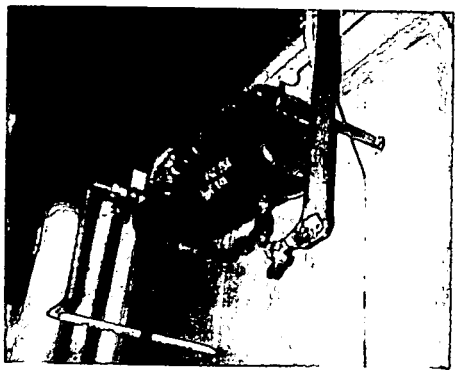

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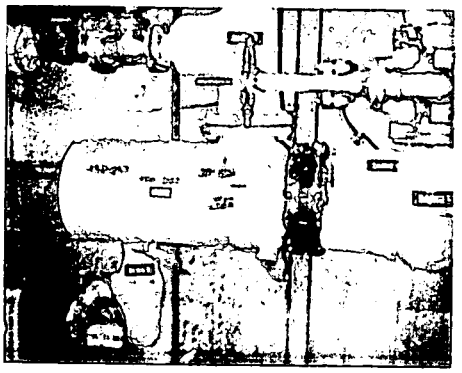

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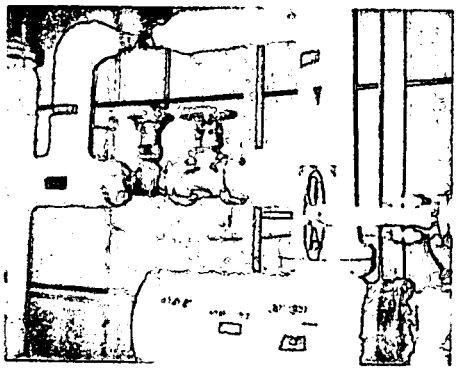

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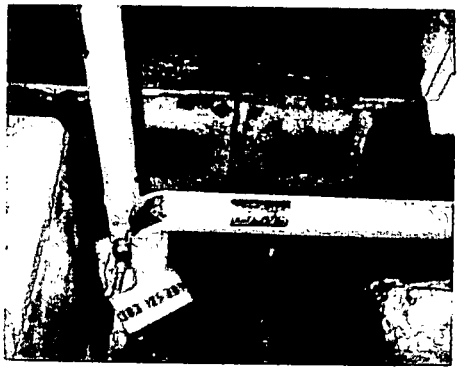

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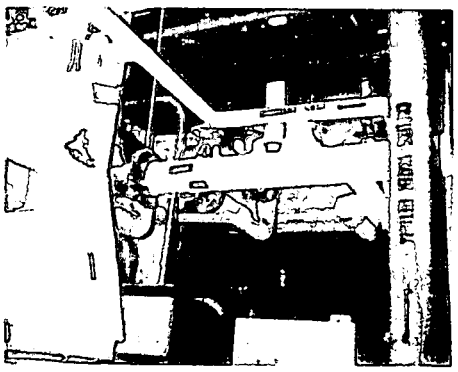

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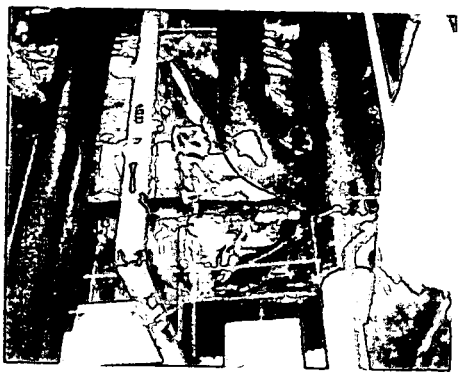

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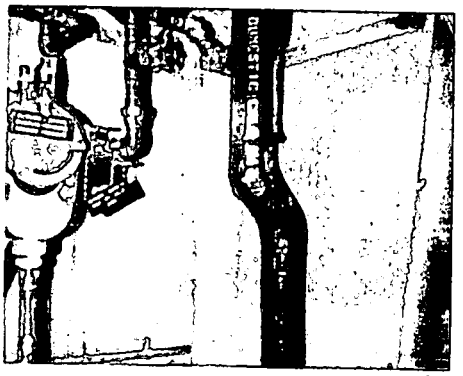

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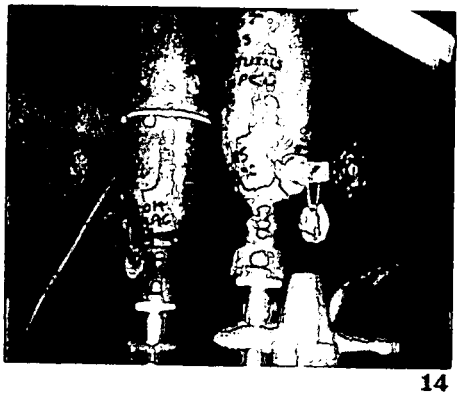

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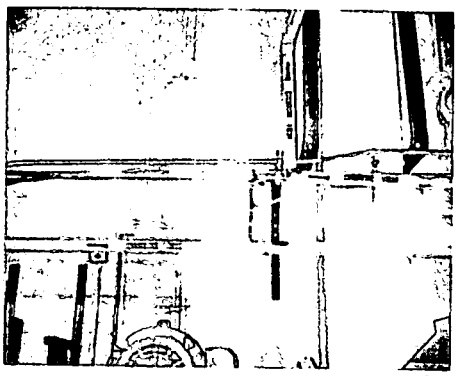

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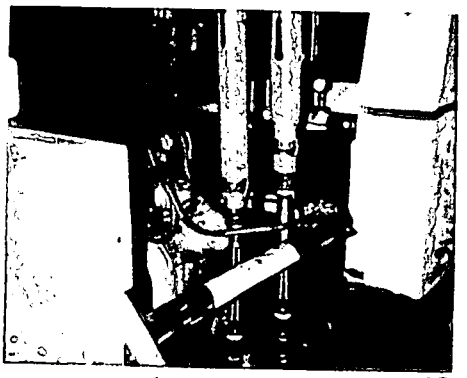

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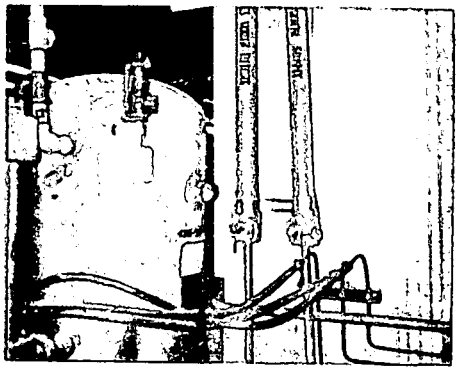

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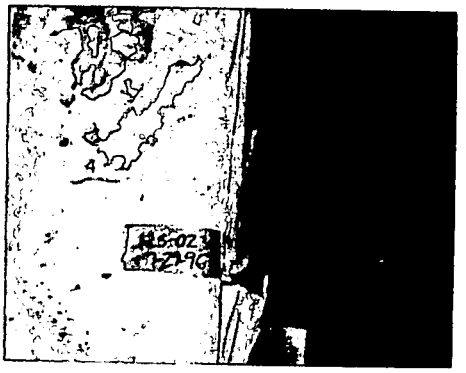

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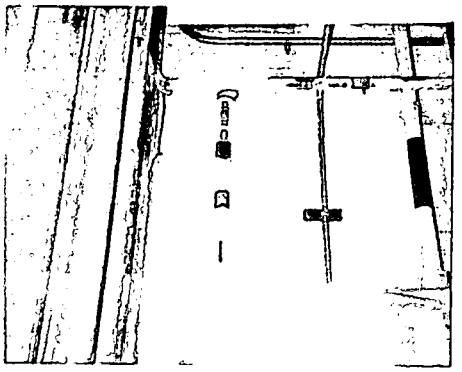

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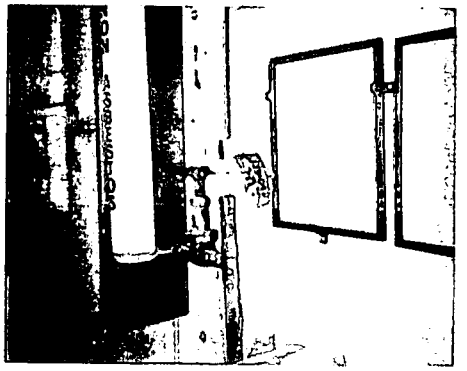

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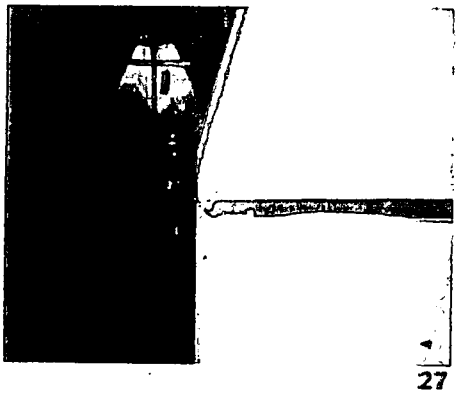

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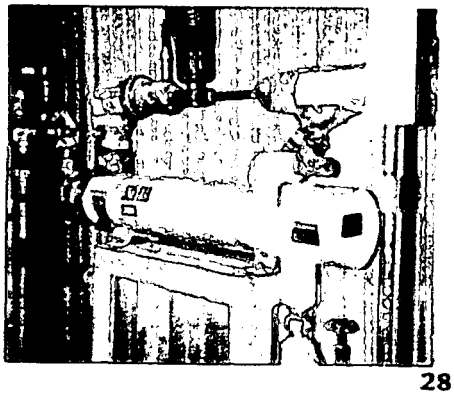

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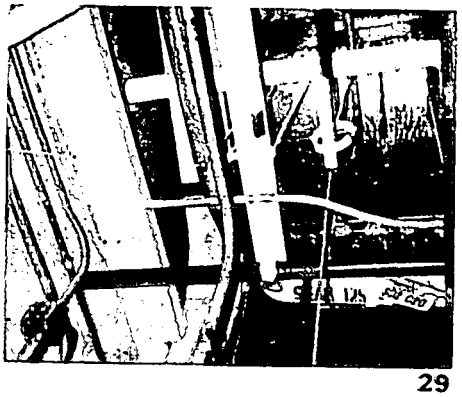

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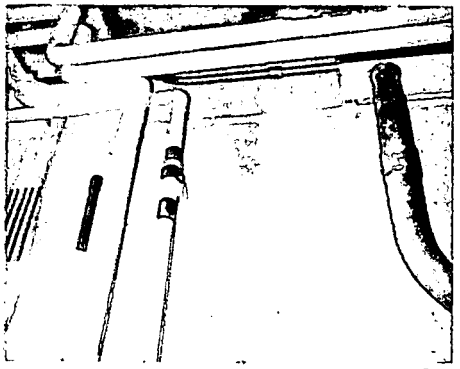

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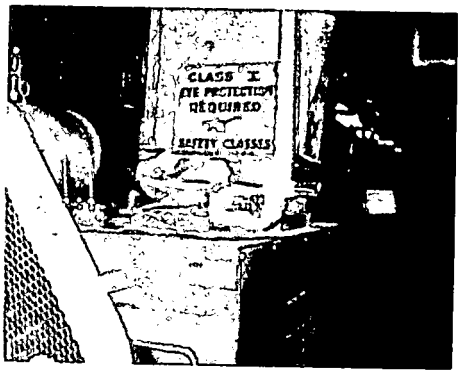

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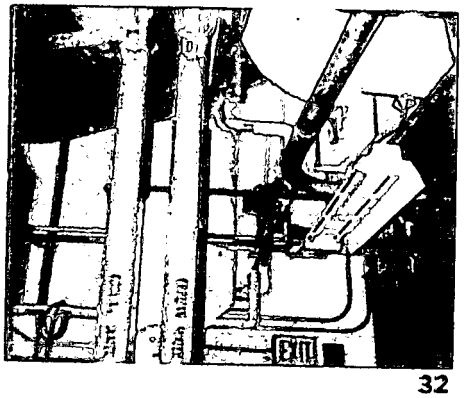

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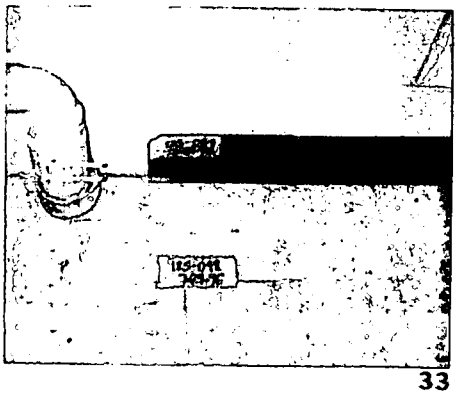

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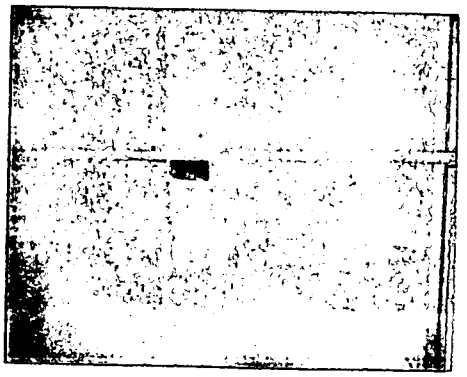

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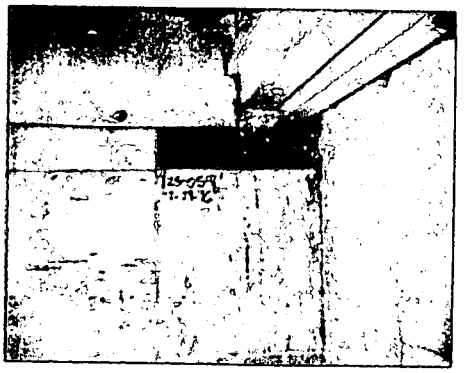

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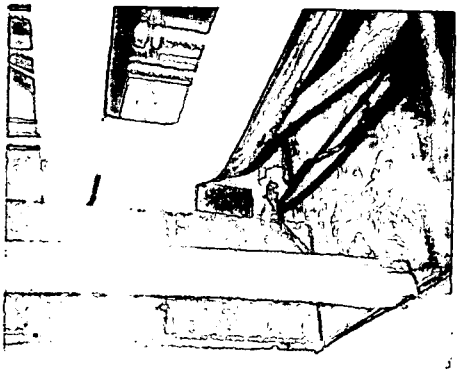

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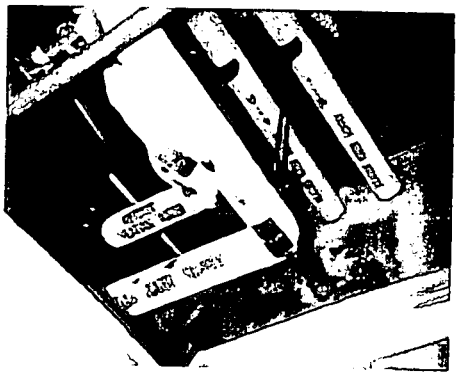

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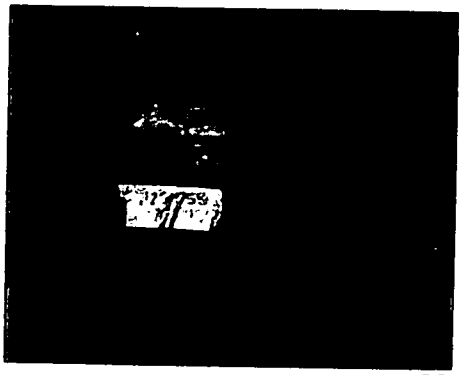

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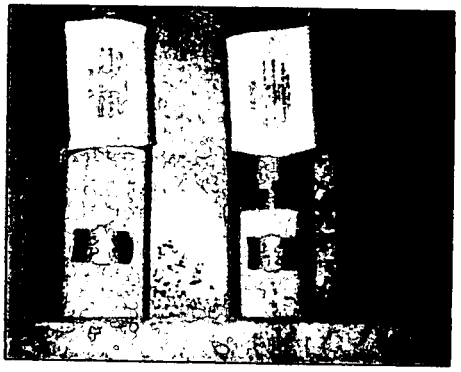

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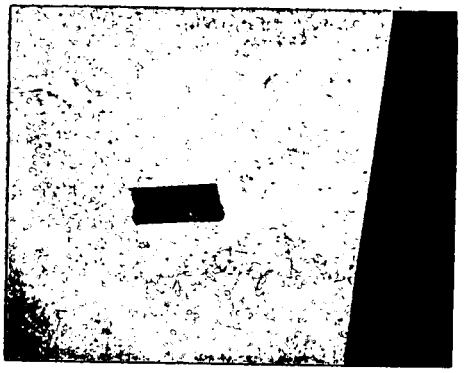

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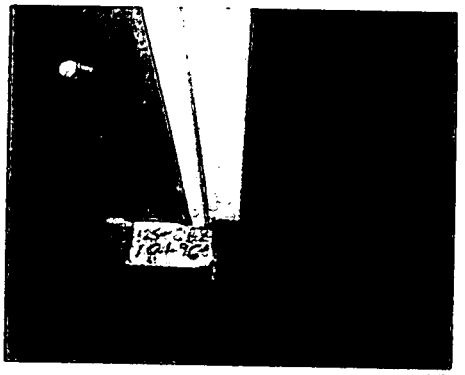

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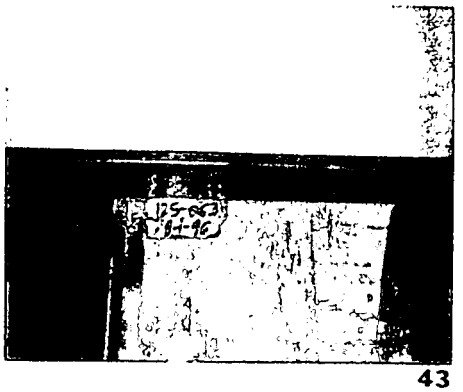

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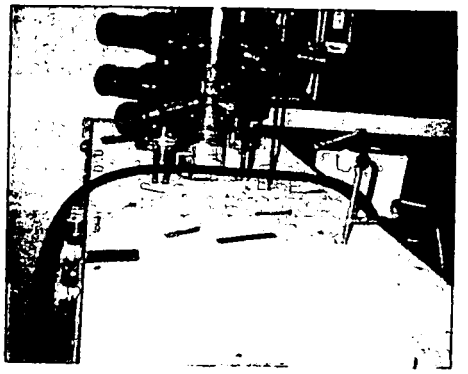

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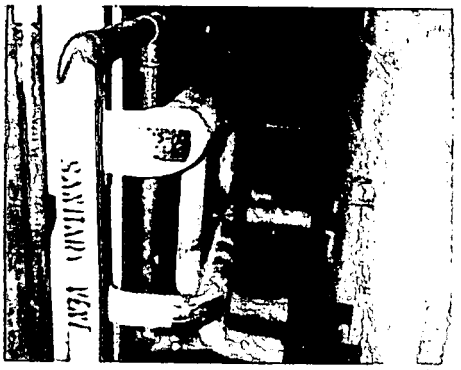

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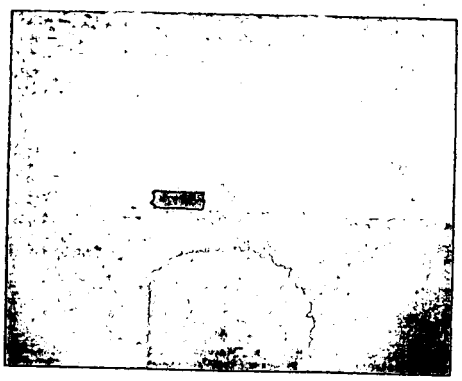

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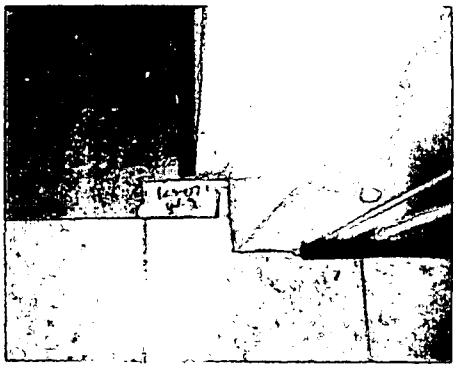

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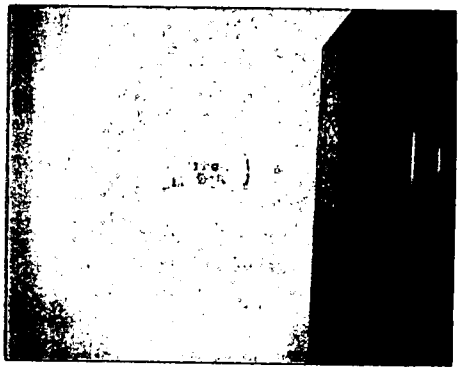

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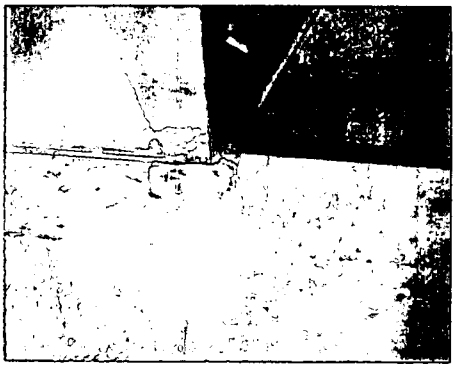

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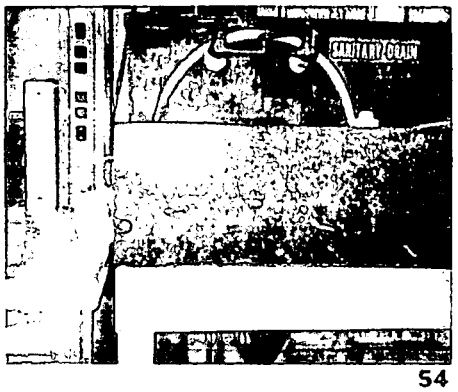

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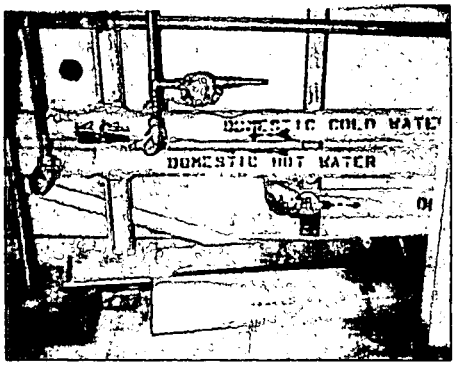

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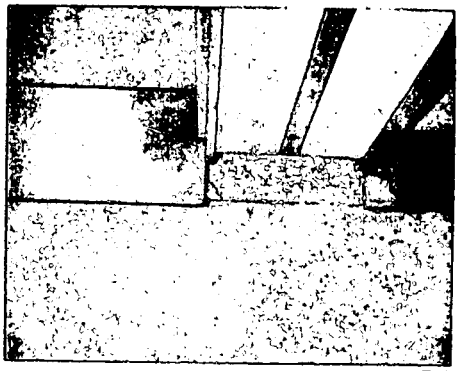

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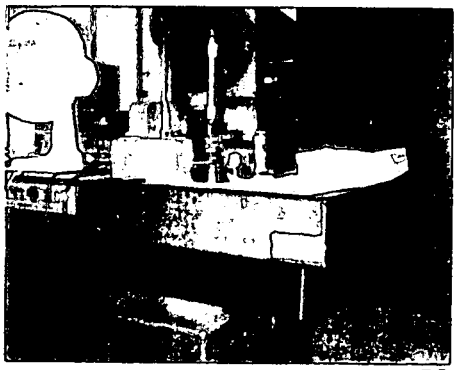

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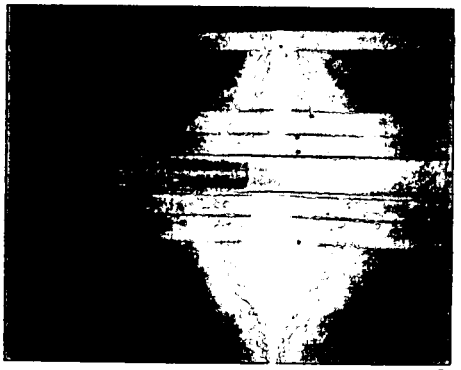

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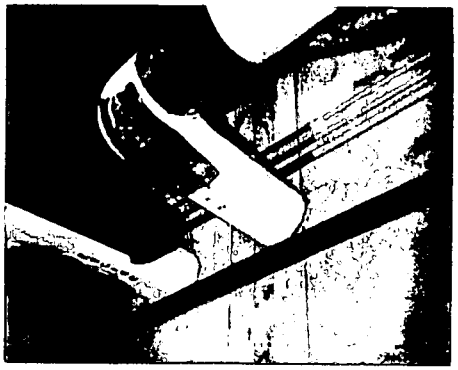

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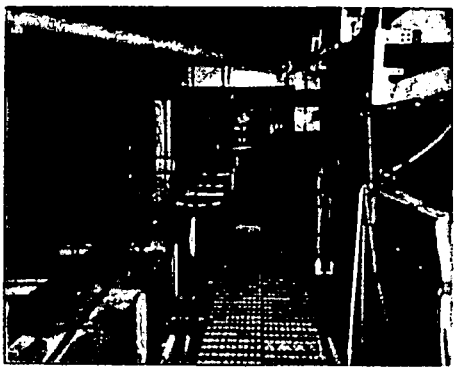

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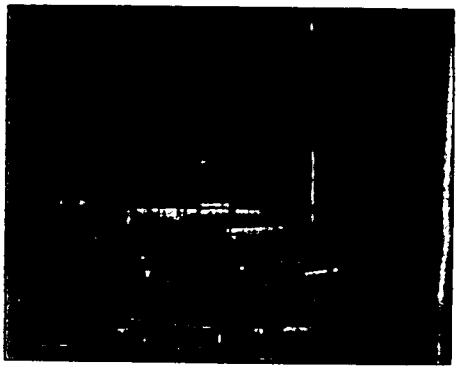

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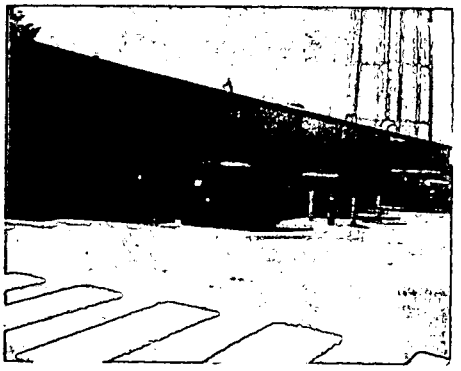

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SITEX

APPENDIX F

LABORATORY ANALYSIS AND LAB QUALIFICATIONS

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 0805
Telephone: 609-231-9449 Fax: 609-231-981

CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521686 **Material Description:** White Insulation
Client No.: 125-001 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
20	Amosite	20	Mineral Wool	60

Lab No. 521687 **Material Description:** Sample Not Analyzed
Client No.: 125-002 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521688 **Material Description:** Sample Not Analyzed
Client No.: 125-003 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521689 **Material Description:** White/Tan
Client No.: 125-004 **Location:** Sheetrock (No JtCompound)

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	15	Cellulose	85

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Thom Snyder

Date: SEP 07 1996

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521690 **Material Description:** White Insulation
Client No.: 125-005 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
5	Amosite	30	Mineral Wool	35

Lab No. 521691 **Material Description:** White/Yellow/Tan
Client No.: 125-006 **Location:** Lag/Insulation

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	60	Fibrous Glass	20
		15	Mineral Wool	
		5	Cellulose	

Lab No. 521692 **Material Description:** White/Tan
Client No.: 125-007 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Amosite	25	Mineral Wool	65
2	Chrysotile	5	Cellulose	

Lab No. 521693 **Material Description:** White/Tan
Client No.: 125-008 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
15	Chrysotile	10	Cellulose	60
15	Amosite			

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Thom Snyder

Date: SEP 07 1996

Approved By: Frank E. Ehrenfeld

Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521694 **Material Description:** Sample Not Analyzed
Client No.: 125-009 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521695 **Material Description:** Sample Not Analyzed
Client No.: 125-010 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521696 **Material Description:** Gray Insulation
Client No.: 125-011 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
65	Amosite	None Detected	None Detected	35

Lab No. 521697 **Material Description:** White Lag/Insulation
Client No.: 125-012 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
20	Amosite	50	Fibrous Glass	25
		5	Cellulose	

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

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118

Analysis Performed By: Thom Snyder

Date: SEP 07 1996

Approved By: Frank E. Ehrenfeld

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CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521698 **Material Description:** White Insulation/Lag
Client No.: 125-013 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
2	Amosite	20	Mineral Wool	70
3	Chrysotile	5	Cellulose	

Lab No. 521699 **Material Description:** White Insulation/Lag
Client No.: 125-014 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
20	Chrysotile	10	Mineral Wool	60
		10	Cellulose	

Lab No. 521700 **Material Description:** Sample Not Analyzed
Client No.: 125-015 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521701 **Material Description:** White Insulation/Lag
Client No.: 125-016 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
30	Amosite	10	Cellulose	60

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119

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Date: SEP 07 1996

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CERTIFICATE OF ANALYSIS

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Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521702 **Material Description:** White Insulation
Client No.: 125-017 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
8	Chrysotile	25	Mineral Wool	65
2	Amosite			

Lab No. 521703 **Material Description:** White
Client No.: 125-018 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Amosite	20	Mineral Wool	65
2	Chrysotile	10	Cellulose	

Lab No. 521704 **Material Description:** Sample Not Analyzed
Client No.: 125-019 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521705 **Material Description:** White/Yellow/Brown
Client No.: 125-020 **Location:** Lag/Insulation

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	50	Fibrous Glass	15
		30	Mineral Wool	
		5	Cellulose	

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120 **Analysis Performed By:** Thom Snyder

Date: SEP 07 1996

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Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521706 **Material Description:** Gray/White
Client No.: 125-021 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
15	Amosite	20	Cellulose	65

Lab No. 521707 **Material Description:** White Insulation/Lag
Client No.: 125-022 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Chrysotile	10	Mineral Wool	65
2	Amosite	20	Cellulose	

Lab No. 521708 **Material Description:** Tan Lag
Client No.: 125-023 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	90	Cellulose	10

Lab No. 521709 **Material Description:** Black/Silver
Client No.: 125-024 **Location:** Insulation

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	40	Fibrous Glass	60

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Analysis Performed By: Thom Snyder

Date: SEP 07 1996

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Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521710 **Material Description:** White Lag
Client No.: 125-025 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	80	Cellulose	20

Lab No. 521711 **Material Description:** Black/White
Client No.: 125-026 **Location:** Insulation

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	50	Fibrous Glass	50

Lab No. 521712 **Material Description:** White/Tan
Client No.: 125-027 **Location:** Insulation

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Chrysotile	20	Mineral Wool	70
2	Amosite	5	Cellulose	

Lab No. 521713 **Material Description:** White Lag/Insulation
Client No.: 125-028 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
4	Chrysotile	10	Mineral Wool	25
1	Amosite	60	Cellulose	

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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127 **Analysis Performed By:** Thom Snyder

Date: SEP 07 1996
SEP 09 1996

Approved By: Frank E. Ehrenfeld

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CERTIFICATE OF ANALYSIS

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Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521714 **Material Description:** Sample Not Analyzed
Client No.: 125-029 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521715 **Material Description:** Tan/White Lag/Paint
Client No.: 125-030 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	88	Cellulose	10
		2	Mineral Wool	

Lab No. 521716 **Material Description:** White/Black
Client No.: 125-031 **Location:** Insulation

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	80	Fibrous Glass	20

Lab No. 521717 **Material Description:** White Insulation
Client No.: 125-032 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
10	Chrysotile	25	Mineral Wool	65

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Thom Snyder
Date: SEP 0 8 1996

Approved By: Frank E. Ehrenfeld
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Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521718 **Material Description:** Sample Not Analyzed
Client No.: 125-033 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521719 **Material Description:** Sample Not Analyzed
Client No.: 125-034 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521720 **Material Description:** White/Tan
Client No.: 125-035 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
15	Amosite	10	Cellulose	55
10	Chrysotile	10	Mineral Wool	

Lab No. 521721 **Material Description:** White/Tan
Client No.: 125-036 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Chrysotile	15	Mineral Wool	65
3	Amosite	14	Cellulose	

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Thom Snyder

Date: SEP 03 1996

Approved By: Frank E. Ehrenfeld

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Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521722 **Material Description:** Sample Not Analyzed
Client No.: 125-037 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521723 **Material Description:** Sample Not Analyzed
Client No.: 125-038 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521724 **Material Description:** White/Black
Client No.: 125-039 **Location:** Insulation

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	80	Fibrous Glass	20

Lab No. 521725 **Material Description:** Gray Insulation
Client No.: 125-040 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	25	Mineral Wool	75

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Thom Snyder

Date: SEP 08 1996

125

Approved By: Frank E. Ehrenfeld

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CERTIFICATE OF ANALYSIS

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St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521726 **Material Description:** White/Tan
Client No.: 125-041 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Chrysotile	10	Mineral Wool	64
3	Amosite	20	Cellulose	

Lab No. 521727 **Material Description:** Sample Not Analyzed
Client No.: 125-042 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521728 **Material Description:** Gray/Tan
Client No.: 125-043 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
20	Amosite	25	Cellulose	55

Lab No. 521729 **Material Description:** White Insulation
Client No.: 125-044 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Amosite	20	Mineral Wool	75
2	Chrysotile			

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126

Analysis Performed By: Thom Snyder

Date: SEP 0? 1996

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Report Date: 09/30/1996
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Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521730 **Material Description:** Tan/Yellow
Client No.: 125-045 **Location:** Lag/Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	95	Cellulose	5

Lab No. 521731 **Material Description:** White Insulation
Client No.: 125-046 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
5	Amosite	17	Mineral Wool	75
3	Chrysotile			

Lab No. 521732 **Material Description:** Sample Not Analyzed
Client No.: 125-047 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521733 **Material Description:** Off White Floor Tile
Client No.: 125-048 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 0.50	Chrysotile	None Detected	None Detected	PC 99.5

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Thom Snyder

Date: SEP 0 8 1996

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Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521733 **Material Description:** Off White Floor Tile
Client No.: 125-048 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	4	Cellulose	96
Black Tar Mastic From Above				

Lab No. 521734 **Material Description:** Brown Rubber Comp
Client No.: 125-049 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 521735 **Material Description:** Gray Ceiling Tile
Client No.: 125-050 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Amosite	92	Mineral Wool	5
Trace	Chrysotile			

Lab No. 521736 **Material Description:** Tan/Brown/White
Client No.: 125-051 **Location:** Sheetrock (No Joint Compound)

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	18	Cellulose	80
		2	Mineral Wool	

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Analysis Performed By: Thom Snyder

128 **Date:** SEP 0 8 1996

Approved By: Frank E. Ehrenfeld

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BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521737 **Material Description:** White/Tan
Client No.: 125-052 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
5	Chrysotile	23	Mineral Wool	60
2	Amosite	10	Cellulose	

Lab No. 521738 **Material Description:** Sample Not Analyzed
Client No.: 125-053 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Not Analyzed		Not Analyzed		

Lab No. 521739 **Material Description:** Tan Floor Tile
Client No.: 125-054 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 0.25	Chrysotile	None Detected	None Detected	PC 99.75

Lab No. 521739 **Material Description:** Tan Floor Tile
Client No.: 125-054 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100
Black Tar Mastic				
From Above				

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Thom Snyder

Date: SEP 08 1996

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Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521740 **Material Description:** Tan Floor Tile
Client No.: 125-055 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
10	Chrysotile	None Detected	None Detected	90

Lab No. 521740 **Material Description:** Tan Floor Tile
Client No.: 125-055 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
5	Chrysotile	None Detected	None Detected	95

Black Tar Mastic
From Above

Lab No. 521741 **Material Description:** Off White Floor Tile
Client No.: 125-056 **Location:** (No Mastic)

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 521742 **Material Description:** Tan Floor Tile
Client No.: 125-057 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
4	Chrysotile	None Detected	None Detected	96

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130

Analysis Performed By: Thom Snyder

Date: SEP 08 1996

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Report Date: 09/30/1996
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Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521742 **Material Description:** Tan Floor Tile
Client No.: 125-057 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	5	Cellulose	95
Black Tar Mastic From Above				

Lab No. 521743 **Material Description:** Green/White
Client No.: 125-058 **Location:** Floor Tile w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
5	Chrysotile	None Detected	None Detected	95

Lab No. 521743 **Material Description:** Green/White
Client No.: 125-058 **Location:** Floor Tile w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
6	Chrysotile	None Detected	None Detected	94
Black Tar Mastic From Above				

Lab No. 521744 **Material Description:** Gray/Tan
Client No.: 125-059 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
35	Amosite	5	Cellulose	60

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Thom Snyder
Date: SEP 08 199

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521745 **Material Description:** White/Tan
Client No.: 125-060 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
20	Amosite	5	Cellulose	60
15	Chrysotile			

Lab No. 521746 **Material Description:** White Texture
Client No.: 125-061 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	90	Cellulose	10

Lab No. 521747 **Material Description:** White Plaster
Client No.: 125-062 **Location:** w/Yellow Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 521747 **Material Description:** White Plaster
Client No.: 125-062 **Location:** w/Yellow Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100
Yellow Mastic				
From Above				

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Thom Snyder

Date: SEP 03 1996

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

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IATL International Asbestos Testing Laboratories

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CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521748 **Material Description:** Gray Floor Tile
Client No.: 125-063 **Location:** (No Mastic)

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
15	Chrysotile	None Detected	None Detected	85

Lab No. 521749 **Material Description:** Gray Insulation
Client No.: 125-064 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
70	Chrysotile	None Detected	None Detected	30

Lab No. 521750 **Material Description:** White/Tan
Client No.: 125-065 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
3	Chrysotile	20	Mineral Wool	70
2	Amosite	5	Cellulose	

Lab No. 521751 **Material Description:** White
Client No.: 125-066 **Location:** Insulation/Lag

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
4	Chrysotile	20	Mineral Wool	65
3	Amosite	8	Cellulose	

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Thom Snyder

Approved By: Frank E. Ehrenfeld

Frank E. Ehrenfeld, III
Laboratory Director

133 **Date:** SEP 03 1996

IATL International Asbestos Testing Laboratories

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Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521752 **Material Description:** White Floor Tile
Client No.: 125-067 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 521752 **Material Description:** White Floor Tile
Client No.: 125-067 **Location:** w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100
Black Tar Mastic From Above				

Lab No. 521753 **Material Description:** Tan Ceiling Tile
Client No.: 125-068 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	50	Cellulose	20
		30	Mineral Wool	

Lab No. 521754 **Material Description:** Gray Debris
Client No.: 125-069 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
30	Chrysotile	None Detected	None Detected	70

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

134

Analysis Performed By: Thom Snyder

Date: SEP 03 1996

Approved By: Frank E. Ehrenfeld

Frank E. Ehrenfeld, III
Laboratory Director

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CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521755 **Material Description:** Black Non Fibrous
Client No.: 125-070 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 521756 **Material Description:** Gray/Blue/White
Client No.: 125-071 **Location:** Floor Tile w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 1.8	Chrysotile	None detected	None Detected	PC 98.2

Lab No. 521756 **Material Description:** Gray/Blue/White
Client No.: 125-071 **Location:** Floor Tile w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	Trace	Cellulose	100
Black Mastic From Above				

Lab No. 521757 **Material Description:** Gray Debris
Client No.: 125-072 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
30	Chrysotile	None Detected	None Detected	70

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: H. Sonny Robb, AIHA-AAR 4883

Date: SEP 09 1996

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

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CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521758 **Material Description:** White Floor Tile
Client No.: 125-073 **Location:** w/Tan Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 0.25	Chrysotile	None Detected	None Detected	PC 99.75

Lab No. 521758 **Material Description:** White Floor Tile
Client No.: 125-073 **Location:** w/Tan Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100
Tan Mastic				
From Above				

Lab No. 521759 **Material Description:** OffWhite/Tan/Black
Client No.: 125-074 **Location:** Floor Tile w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
10	Chrysotile	None Detected	None Detected	90

Lab No. 521759 **Material Description:** OffWhite/Tan/Black
Client No.: 125-074 **Location:** Floor Tile w/Black Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
10	Chrysotile	None Detected	None Detected	90
Black Mastic				
From Above				

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: H. Sonny Robb, AIHA-AAR 4883
Date: SEP 09 1996

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

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CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521760 **Material Description:** Black Non Fibrous
Client No.: 125-075 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 521761 **Material Description:** Gray/White Fibrous
Client No.: 125-076 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
35	Chrysotile	None Detected	None Detected	65

Lab No. 521762 **Material Description:** Tan/White Fibrous
Client No.: 125-077 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	40	Cellulose	50
		10	Fibrous Glass	

Lab No. 521763 **Material Description:** Tan/White Fibrous
Client No.: 125-078 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	30	Cellulose	55
		15	Fibrous Glass	

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

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Analysis Performed By: H. Sonny Robb
H. Sonny Robb, AIHA-AAR 4883

Date: SEP 09 1996

Approved By: Frank E. Ehrenfeld

Frank E. Ehrenfeld, III
Laboratory Director

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16000 Horizon Way Unit 100 Mt. Laurel, NJ 0805
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CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521764 **Material Description:** Tan/GrayWhite
Client No.: 125-079 **Location:** Linoleum w/Tan Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
25	Chrysotile	None Detected	None Detected	75

Lab No. 521764 **Material Description:** Tan/GrayWhite
Client No.: 125-079 **Location:** Linoleum w/Tan Mastic

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Tan mastic
From Above

Lab No. 521765 **Material Description:** Black Non Fibrous
Client No.: 125-080 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 521766 **Material Description:** Gray/Silver Fibrous
Client No.: 125-081 **Location:**

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
70	Chrysotile	15	Fibrous Glass	15

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: N. Sonny Robb
Date: SEP 09 1996 H. Sonny Robb, AIHA-AAR 4883

Approved By: Frank E. Ehrenfeld
Frank E. Ehrenfeld, III
Laboratory Director

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IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/30/1996
Project: DOE,RockyFlats,Bldg125,8-22-96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521767
Client No.: 125-082
Material Description: Off White/Tan
Location: Fibrous

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 5.3	Chrysotile	10	Fibrous Glass	PC 55.2
PC 4.5	Amosite	25	Cellulose	

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: H. Sonny Robb, AIHA-AAR 4883

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

Date: SEP 03 1996

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16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054
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CERTIFICATE OF ANALYSIS

Client: Sitex Environmental, Inc
11905 Borman Drive
St. Louis MO 63146

Report Date: 09/10/1996
Project: Project No. 108230,8/22/96
Project No.: 108230

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 521571 **Material Description:** Tan Roof Material
Client No.: 125-100 **Location:** Insulation Rocky Flats CO

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	85	Cellulose	15

Lab No. 521572 **Material Description:** Tan/Black Roof Mat.
Client No.: 441-100 **Location:** Rubber Rocky Flats CO

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	25	Cellulose	74
		1	Synthetic	
		Trace	Fibrous Glass	

Lab No. 521573 **Material Description:** White/Black Silver
Client No.: 441-101 **Location:** Roof Rubber Mat. Rocky Flats CO

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	Trace	Cellulose	100

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: [signature]

Date: SEP 9 96

Approved By: [signature]

Frank E. Ehrenfeld, III
Laboratory Director

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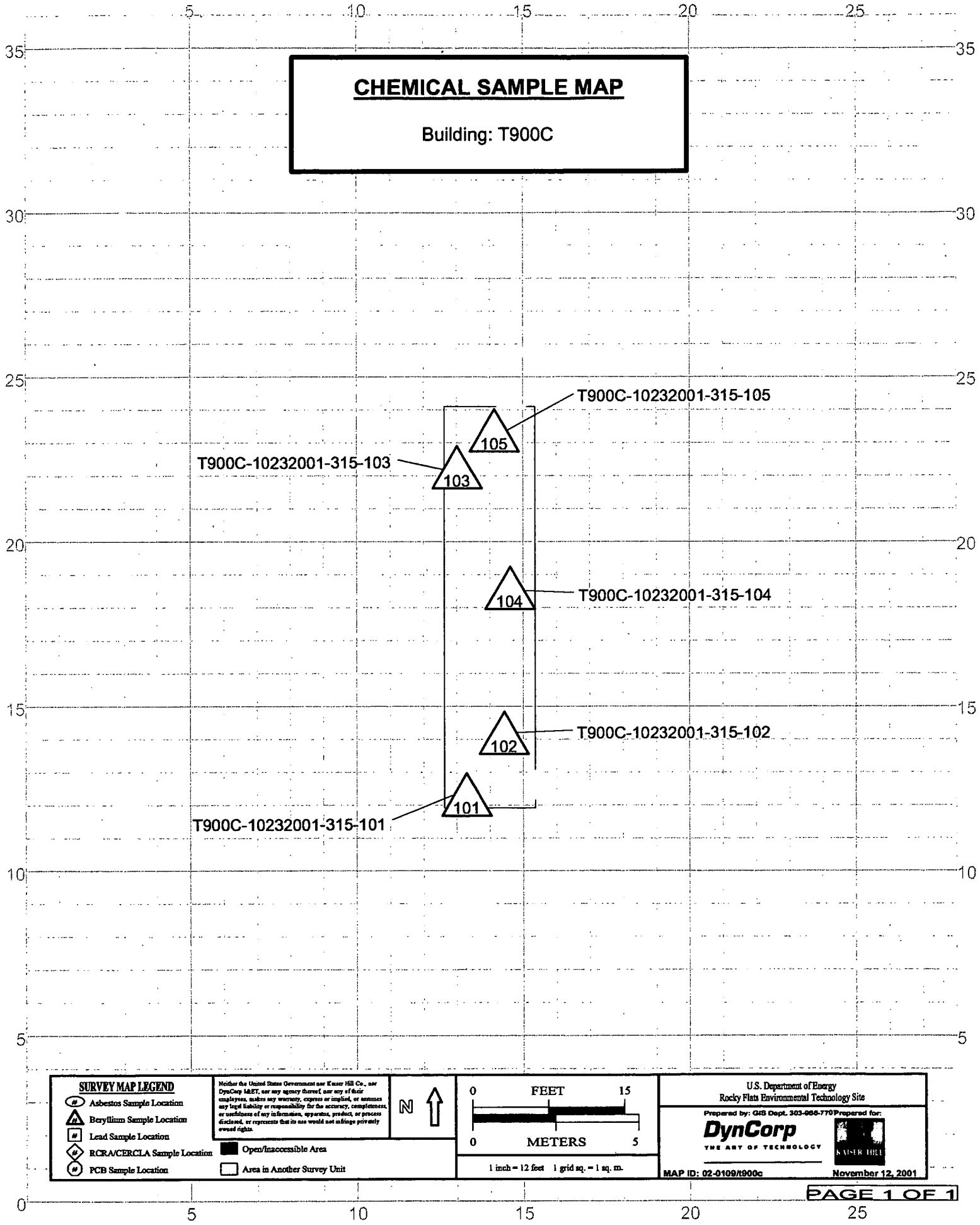
Beryllium Data Summary

Sample Number	Sample Location	Result ($ug/100\ cm^2$)
B125		
125-10222001-315-101	Room 109, concrete floor by east wall	<0.1
125-10222001-315-102	Room 109, top of electrical track, east wall	<0.1
125-10222001-315-103	Room 109, top of red "Fire Reporting Telephone Box", south wall	<0.1
125-10222001-315-104	Room 108C, corner of fume hood	<0.1
125-10222001-315-105	Plenum, top of HVAC duct ,north end	<0.1
125-10222001-315-106	Plenum, top of fluorescent light fixture, above north hall	<0.1
125-10222001-315-107	Room 125, side of HVAC flue, north end of Mech. Room	<0.1
125-10222001-315-108	Room 125, top of air handler in Mech. Room, middle	<0.1
125-10222001-315-109	Room 125, top of refrigerated dryer, south end of Mech. Room	<0.1
125-10222001-315-110	Plenum, top of electrical conduit above Room 115	<0.1
125-10222001-315-111	Plenum, top of HVAC duct above Room 115	<0.1
125-10222001-315-112	Plenum, top of electrical track above Room 116	<0.1
125-10222001-315-113	Room 108, top of steel cross brace on vertical beam	<0.1
125-10222001-315-114	Room 107, in corner on shelf above sink	<0.1
125-10222001-315-115	Room 105A, corner of window sill, east wall	<0.1
125-10222001-315-116	Room 104, top of steel cross brace on vertical beam	<0.1
125-10222001-315-117	Room 104, front edge of entry to fume hood	<0.1
125-10222001-315-118	Room 102, top of TP-1 unit in SE corner	<0.1
125-10222001-315-119	Room 101D, third book shelf	<0.1
125-10222001-315-120	Room 101C, corner of writing desk, SW corner	<0.1
125-10222001-315-121	Room 101A, top of floor heater cover	<0.1
125-10222001-315-122	Room 120, top of floor heater, west wall	<0.1
125-10222001-315-123	Room 122, top of brace above stall in Men's Room	<0.1
125-10222001-315-124	Room 123, top of wood & glass case in Ladies' Room	<0.1
125-10222001-315-125	Room 124, top of electrical track, south wall of Dark Room	<0.1
B763		
763-10222001-315-118	Survey point 1, window sill, east wall	<0.1
763-10222001-315-119	Survey point 2, concrete floor	<0.1
763-10222001-315-120	Survey point 3, window sill, east wall	<0.1
763-10222001-315-121	Survey point 4, concrete floor	<0.1
763-10222001-315-122	Survey point 5, top of electrical panel, north end	<0.1
T900C		
T900C-10232001-315-101	Top of electrical box, east end	<0.1
T900C-10232001-315-102	Metal corrugated floor	<0.1
T900C-10232001-315-103	Angle iron bolted to floor	<0.1
T900C-10232001-315-104	Metal corrugated floor	<0.1
T900C-10232001-315-105	Top of electrical receptacle On/Off box, west end	<0.1


CHEMICAL SAMPLE MAP
Building: T900C
T900C-10232001-315-105
105
T900C-10232001-315-103
103
104
T900C-10232001-315-104
102
T900C-10232001-315-102
101
T900C-10232001-315-101
5
10
15
20
25
30
35
0
SURVEY MAP LEGEND
Asbestos Sample Location
Beryllium Sample Location
Lead Sample Location
RCRA/CERCLA Sample Location
PCB Sample Location
Open/Inaccessible Area
Area in Another Survey Unit
Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.
N
0 FEET 15
0 METERS 5
1 inch = 12 feet 1 grid sq. = 1 sq. m.
U.S. Department of Energy
Rocky Flats Environmental Technology Site
Prepared by: GIS Dept. 303-966-7701 Prepared for:
DynCorp
THE ART OF TECHNOLOGY
KAISER HILL
MAP ID: 02-0109/t900c
November 12, 2001

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PCB Data Summary

B125 PCB Sample Data		
Sample Location	Sample Number	Results (ppb) .. (Aroclor)
Rm 125, North Compressor	02S0007-001.001	160 (1254) 100 (1260)
Rm 125, Central Compressor	02S0007-002.001	35 (1254)
Rm 125, West Wall	02S0007-003.001	250 (1254)
Rm 125, South Compressor	02S0007-004.001	310 (1254)
Rm 125, South Compressor (dupl.)	02S0007-005.001	390 (1254) 96 (1260)
Rm 125, South Air Handler	02S0007-006.001	None Detected
Rm 109, below hoist	02S0007-007.001	8.1 (1254)
Rm 125, South Compressor (swipe)	02S0007-008.001	1600 (1254)

All results are below the regulatory limit for PCB remediation waste (50 ppm), and below the level for cleanup requirements (25 ppm) as outlined in the *Final Proposed Action Memorandum Remediation of Polychlorinated Biphenyls*, RFETS, May 1995.

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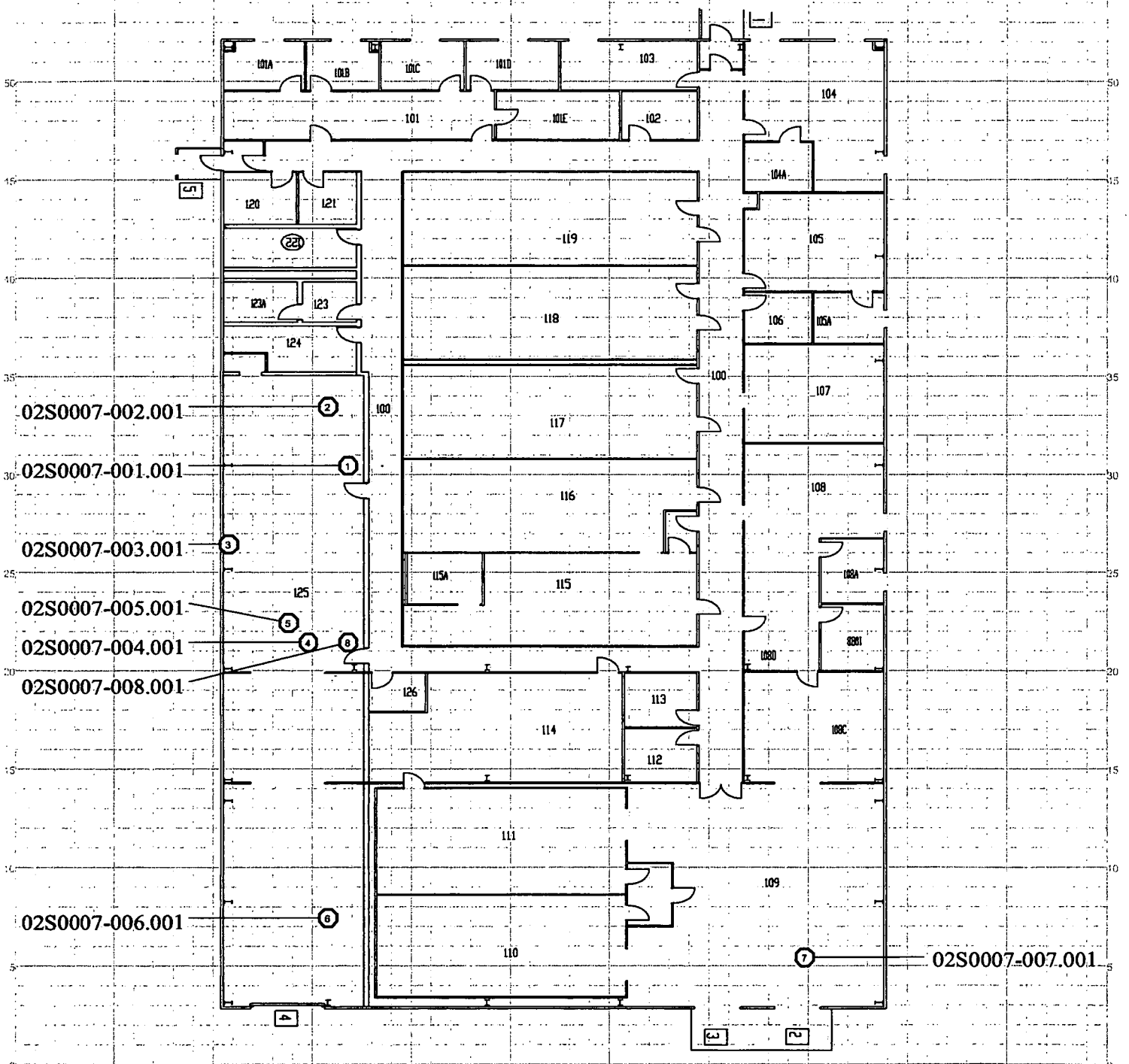
CHEMICAL SAMPLE MAP

Building: 125



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 30

0 METERS 10

NOT TO SCALE

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7701 Prepared for:

DynCorp
THE ART OF TECHNOLOGY

KAISER-HILL

MAP ID: 02-0109/125-PCB

November 27, 2001

000-A-001

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ATTACHMENT E

Data Quality Assessment (DQA) Detail

DATA QUALITY ASSESSMENT (DQA) – B125, B763 and T900C

Data used in making management decisions for decommissioning and waste management must be of adequate quality to support decisions. Determination of adequate data quality is accomplished through the DQA. Adequate data quality for decision-making is required by the Kaiser-Hill Quality Assurance Program Manual as well as by the customer (DOE, RFFO; Order 414.1A, Quality Assurance, §4.b.(2)(b)). Regulators and the public also expect decisions and data that are technically and legally defensible.

Verification and validation criteria, used for the DQA, are summarized in tabular format for each category of data, which is based on the type of analytical method. These summaries are provided in Tables E-1 (asbestos), E-2 (beryllium), E-3 (PCBs) and E-4 (radiological surveys). All quality controls were within tolerance with any exceptions noted. A data completeness summary addresses all data acquired for the Project and is given in Table E-5. The DQA checklist for radiological survey data is maintained in the original radiological Survey Package (taken from RSP 16.04).

This report will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of approval by the Regulators. All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units. Chemical data are organized by RIN (Report Identification Number), which contain the entire analytical data package and are traceable to specific sample numbers and corresponding sample locations.

Consistent with EPA's G-4 DQO process, the radiological survey design (for those survey units performed per PDS requirements) was optimized by checking actual measurement results (acquired during pre-demolition surveys) against model output with original estimates. Use of actual sample/survey (result) variances in the MARSSIM DQO model confirms that an adequate number of surveys were acquired; this is indicated by a standard deviation value of less than 0.30 for each individual survey unit. This DQA implements QA guidelines taken from the following MARSSIM sections:

- §4.9, Quality Control
- §8.2, Data Quality Assessment
- §9.0, Quality Assurance & Quality Control
- Appendix E, Assessment Phase of the Data Life Cycle
- Appendix N, Data Validation using Data Descriptors.

SUMMARY

In summary, the data presented in this report have been verified and validated relative to quality requirements and the project decisions as stated in the original DQOs. All data are satisfactory for the decisions made. All media surveyed and sampled yielded results less than their associated action levels, and all with acceptable uncertainties. The Survey Units and structures identified in this RLCR meet the unrestricted-release criteria with the confidences stated herein and the report in total.

Table E-1 V&V of Chemical Results – Asbestos Group 10 (B125, B763 and T900C)

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		
ASBESTOS	METHOD: EPA 600/R-93/116	LAB ---->	Reservoirs Environmental, Inc	
QUALITY REQUIREMENTS Parameters		RIN ---->	01D0546	
		Measure	Frequency	COMMENTS
ACCURACY		below detectable amounts	≥1	Semi-quantitative, per (microscopic) visual observation
PRECISION		all below detectable amounts	15 samples	Semi-quantitative, per (microscopic) visual observation, repeatability established within the sample set
REPRESENTATIVENESS	COC	Qualitative	NA	Chain-of-Custody intact: completed paperwork, containers w/ custody seals
	Hold times/preservation	Qualitative	NA	Not applicable
	Controlling Documents; Maps (Plans, Procedures, etc.)	Qualitative	NA	original Characterization Package (planning document) for field/sampling procedures; thorough documentation of the planning, sampling/analysis process, and data reduction into formats
COMPARABILITY		% by bulk volume	NA	Use of standardized engineering units in the reporting of measurement results
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	Qualitative	NA	See Table E-5; final number of samples at Certified Inspector's discretion
SENSITIVITY	Detection limits	<1% by volume	all measures	

Table E-2 V&V of Chemical Results-Beryllium Group 10 (B125, B763 and T900C)

V&V CRITERIA, CHEMICAL ANALYSES			DATA PACKAGE		
BERYLLIUM	Preparation: NMAM 7300 METHOD: OSHA ID-125G		LAB ---->	Johns Manville, Littleton, CO	
			RIN ---->	02D0185	
QUALITY REQUIREMENTS Parameters			Measure	frequency	COMMENTS
ACCURACY	Calibrations	INITIAL	Linear calibration	≥1	No qualifications significant enough to change project decisions, i.e. classification of Type 1 Facility confirmed. All results were < 0.1ug/100cm^2.
		continuing	80%<%R<120%	≥1	
	LCS/MS		80%<%R<120%	≥1	
	Blanks	lab & field	<MDL	≥1	
	Interference check std (ICP)			NA	
PRECISION	LCSD		80%<%R<120% (RPD<20%)	≥1	
	Field duplicate		all results < RL	≥1	
REPRESENTATIVENESS	COC		Qualitative	NA	
	Hold times/preservation		Qualitative	NA	
	Maps				
	Controlling Documents (Plans, Procedures, etc.)		Qualitative	NA	
COMPARABILITY	Measurement units		ug/100cm^2	NA	
COMPLETENESS	Plan vs. Actual samples Useable results vs. unusable		>95% >95%	NA	
SENSITIVITY	Detection Limits		MDL of 0.012ug/100cm^2	All measures	

Table E-3 V&V of Chemical Results – PCBs Group 10 Cluster (B125, B763 and T900C)

V&V CRITERIA, CHEMICAL ANALYSES			DATA PACKAGE		
PCBs	METHOD: SW8280		LAB ---->	Severn-Trent, Denver, Co.	
			RIN ---->	02S0007	
QUALITY REQUIREMENT					COMMENTS
Parameters			Measure	frequency	
ACCURACY	Calibrations	INITIAL	r^2 >0.99	≥1/batch	No qualification significant enough to change project decisions, i.e., classification of Type 1 areas confirmed; all PCB concentration were below associated action levels.
		continuing	80%<%R<120%	≥1/batch	
	LCS		80%<%R<120%	≥1/batch	
	MS		75%<%R<125%	≥1/batch	
	Blanks	lab	<MDL	≥1/batch	
PRECISION	MSD		75%<%R<125%	≥1/batch	
	field duplicate		all results < RL	≥1/batch	
REPRESENTATIVENESS	COC		qualitative	NA	
	hold times/preservation		≤30 days extract ≤45 day analysis	NA	
	Controlling Documents (Plans, Procedures, maps, etc.)		qualitative	NA	
COMPARABILITY			ug/kg	NA	
COMPLETENESS	Plan vs. Actual samples usable results vs. unusable		>95% >95%	NA	
SENSITIVITY	detection limits		various	all analytes	

Table E-4 V&V of Radiological Surveys Group 10 Cluster (B125, B763 and T900C)

V&V CRITERIA, RADIOLGICAL SURVEYS			K-H RSP 16.00 Series MARSSIM (NUREG-1575)		
QUALITY REQUIREMENTS					
	Parameters		Measure	frequency	COMMENTS
ACCURACY	initial calibrations		90%<x<110%	≥1	Multi-point calibration through the measurement range encountered in the field
	daily source checks		80%<x<120%	≥1/day	
	local area background	Field	Typically < 10 dpm	≥1/day	All local area backgrounds were within expected ranges (i.e., none anomalouosly high)
PRECISION	field duplicate measurements for TSA		≥ 5% of real survey points	≥10% of reals	
REPRESENTATIVENESS	MARSSIM gridding methodology (Survey Units G10-001 thru G10-005)		statistical and biased	NA	Random w/ statistical confidence; biased to improve confidence
	Survey Maps			NA	Random and biased measurement locations documented to ± 1m
	Controlling documents (Characterization Pkg; RSPs)		qualitative	NA	See Attachment C; original Characterization Package (planning document) for field/sampling procedures; thorough documentation of the planning, sampling/analysis process, and data reduction into formats
COMPARABILITY	units of measure		dpm/100cm^2	NA	Use of standardized engineering units in the reporting of measurement results
COMPLETENESS	Plan vs. Actual surveys usable results vs. unusable		>95% >95%	NA	see Table E-5 for details
SENSITIVITY	detection limits		TSA: ≤50 dpm/100cm^2 RA: ≤10 dpm/100cm^2	all measures	MDAs ≤ ½ DCGLw per MARSSIM guidelines Measure criteria applies to Survey Units G10-001 thru G10-005 only.

Table E-5 Data Completeness Summary Group 10 Cluster (B125, B763 and T900C)

ANALYTE	# Samples Required (incl. Media; Real & QC Samples)	# Taken (Real & QC Samples)[B]	Project Decisions (Conclusions & Uncertainty)	Comments (RIN, Analytical Method, Qualifications, etc.)
Asbestos Map #000-A-001 B125	(biased, reals) 15 biased	(no QC) 8 int./7 ext.	ACM (friable and non-friable) present > 1% by volume	40 CFR 763.86; 5 CCR 1001-10; EPA 600/R-93/116 These samples provided coverage of data gaps not covered by Sitex Environmental Asbestos Inspection Report dated 12/31/96 where the majority of ACM was confirmed. RIN 02D0184
Beryllium (swipes) Map #000-A-001 B125 B763 T900C	(total, biased, reals) 25 biased (interior) 5 biased (interior) 5 biased (interior)	(real, blanks, QC) 10 QC (total) 25 real 5 real 5 real	No contamination found at any location Same Same same	OSHA ID-125G RIN02D0185 Same RIN Same RIN [No results above action level (0.2 ug/100cm^2) or investigative level (0.1 ug/100cm^2)]
PCBs Map #000-A-001 B125	Total (reals, duplicates) Dependent on walkdown	 7 reals, 1 duplicate	All results were below regulatory limits of 50 ppm	RIN02S0007
Radiological Surveys Area G10001- G10005 • Survey Units G10-001 B763 Breezeway	 16 α, β TSA (random) 2 QC TSA 16 α, β Smears (random)	(real, QC) 32 real, 2 QC (interior)	No contamination found, all values < unrestricted release levels Same	No results, due to DOE-added radionuclides, above alpha DCGL$_W$ action levels (20 dpm/100cm^2 removable, 100 dpm/100cm^2 [average per 1m^2]) or above beta DCGL$_W$ action levels (1000 dpm/100cm^2 removable, 5000 dpm/100cm^2 [average per 1m^2])

Table E-5 Data Completeness Summary Group 10 Cluster (B125, B763 and T900C)

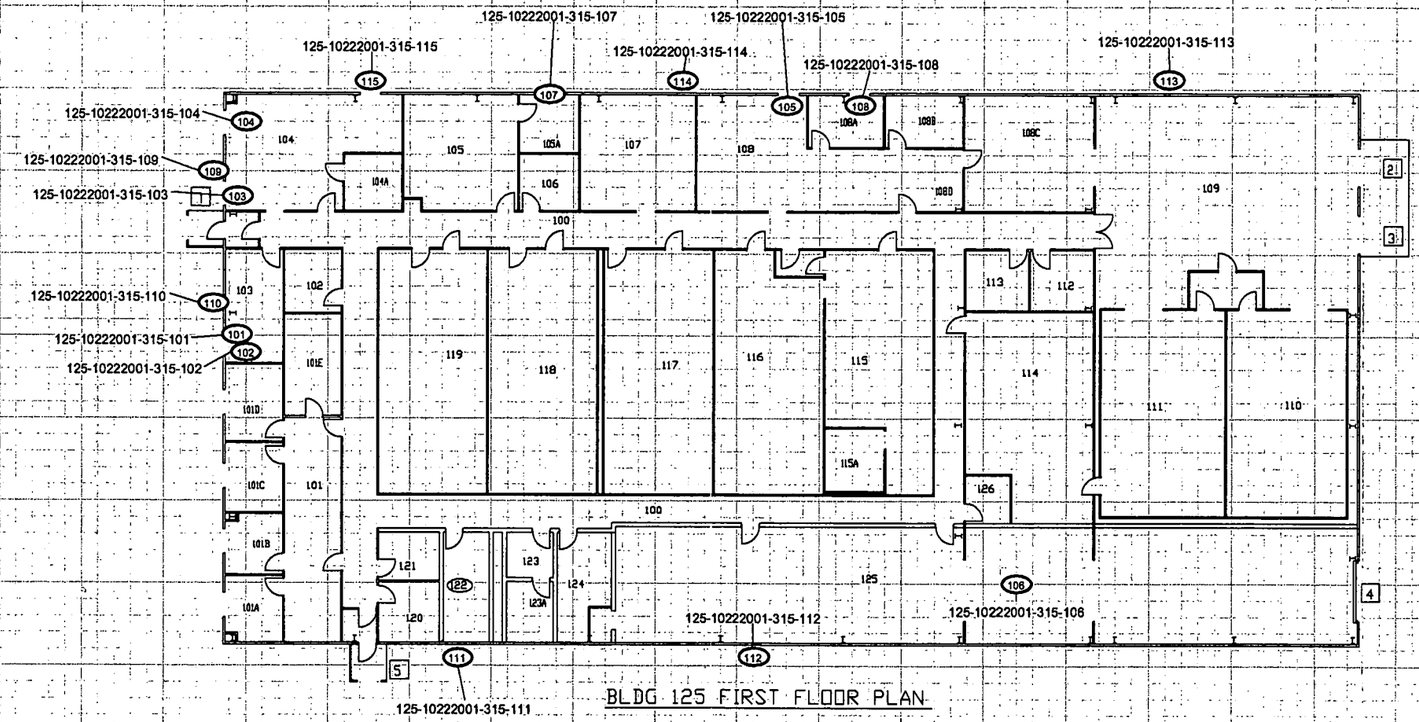
ANALYTE	# Samples Required (incl. Media; Real & QC Samples)	# Taken (Real & QC Samples)[B]	Project Decisions (Conclusions & Uncertainty)	Comments (RIN, Analytical Method, Qualifications, etc.)
G10-002 B763 breezeway exterior	15 α, β TSA (random) 2 QC TSA 15 α, β Smears (random)	30 real, 2 QC	Same	4 sample location investigations - locations were sealed and allowed to decay. Follow-up surveys gave gross and alpha TSA below $DCGL_w$ limits, indicating positive readings are most likely radon daughter products.
G10-003 T900C (int./ext.)	15 α, β TSA (random) 2 QC TSA 15 α, β Smears (random)	30 real, 2 QC 8 (int.) 7 (ext.)	Same	
G10-004 B125 interior	22 α, β TSA (random)/ 47 α, β TSA (biased) 6 QC TSA 22 α, β Smears (random)/ 47 α, β Smears (biased)	138 real, 6 QC	Same	An additional 47 biased samples were taken above the minimum required 22 samples to provide adequate coverage of area.
G10-005 B125 exterior	25 α, β TSA (random) 2 QC TSA 25 α, β Smears (random)	50 real, 2 QC	Same	

[A] # of samples required is estimate only, based on miscellaneous material types; final # of samples at discretion of IH

[B] int. – building interior, ext. – building exterior

CHEMICAL SAMPLE MAP

Building: 125



SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 45

0 METERS 15

1 inch = 30 feet 1 grid sq. = 1 sq. m.

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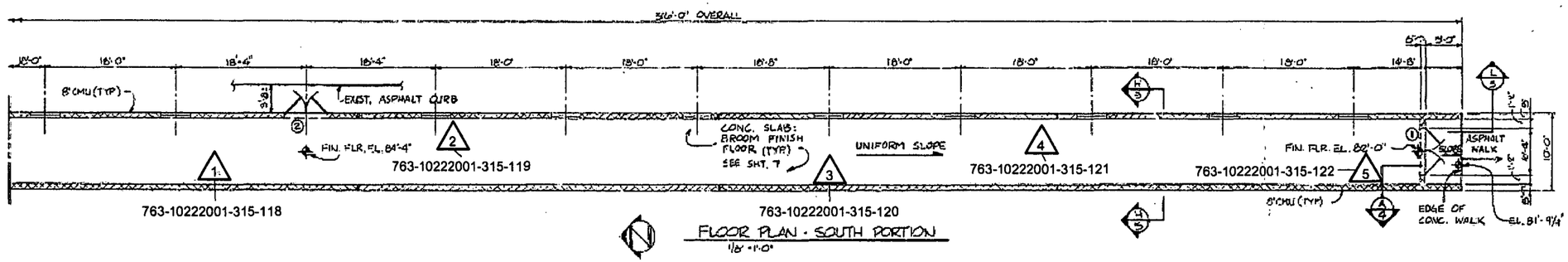
CHEMICAL SAMPLE MAP

Building: 763 - Breezeway



FLOOR PLAN - SOUTH PORTION

1/8" = 1'-0"

SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

NOT TO SCALE

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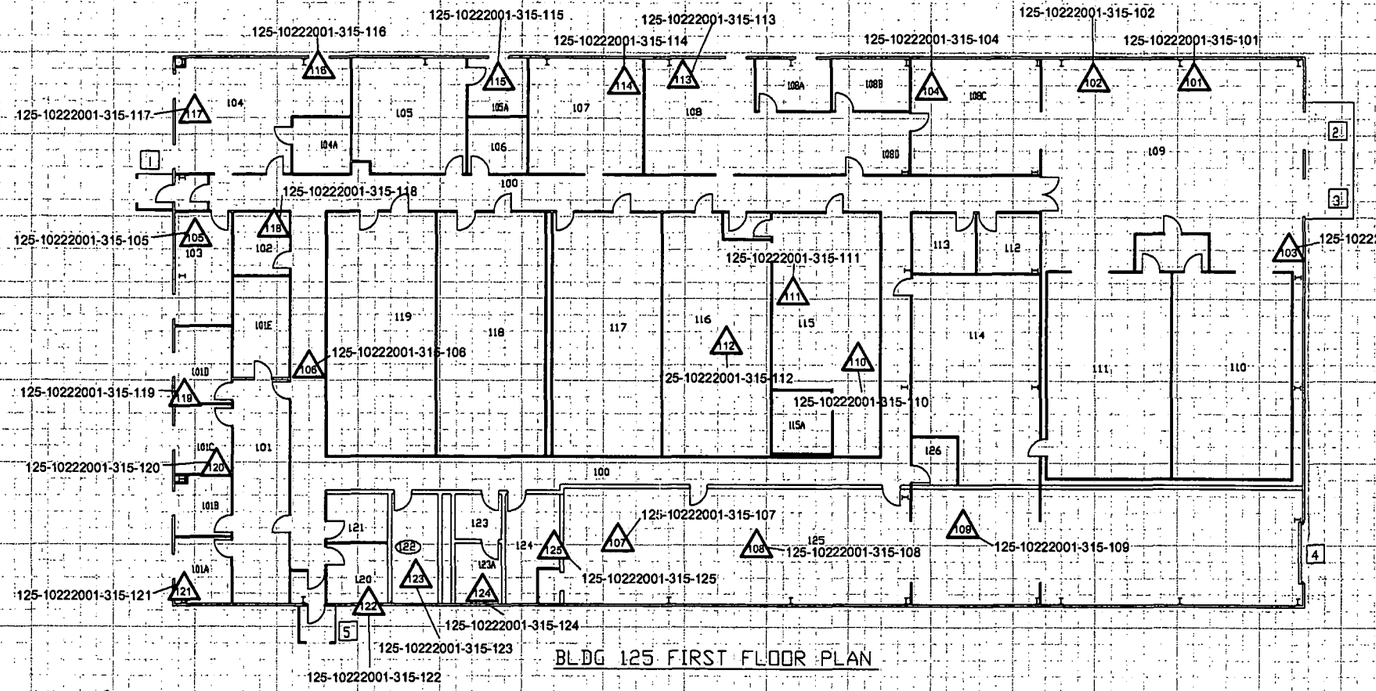
CHEMICAL SAMPLE MAP

Building: 125



BLDG 125 FIRST FLOOR PLAN

SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

N

0 FEET 45

0 METERS 15

1 inch = 30 feet 1 grid sq. = 1 sq. m.

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MAP ID: 02-0109/B125-Bg November 12, 2001

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